

Service Manual



DEH-1100MPB/XN/EW5

ORDER NO.
CRT4230

CD RDS RECEIVER

DEH-1100MPB/XN/EW5

DEH-1100MP/XN/EW5

DEH-1120MP/XN/EW5

This service manual should be used together with the following manual(s):

Model No.	Order No.	Mech.Module	Remarks
CX-3195	CRT3815	S10.5COMP2	CD Mech. Module : Circuit Descriptions, Mech. Descriptions, Disassembly



For details, refer to "Important Check Points for Good Servicing".

SAFETY INFORMATION

This service manual is intended for qualified service technicians; it is not meant for the casual do-it-yourselfer. Qualified technicians have the necessary test equipment and tools, and have been trained to properly and safely repair complex products such as those covered by this manual. Improperly performed repairs can adversely affect the safety and reliability of the product and may void the warranty. If you are not qualified to perform the repair of this product properly and safely, you should not risk trying to do so and refer the repair to a qualified service technician.

Where in a manufacturer's service documentation, for example in circuit diagrams or lists of components, a symbol is used to indicate that a specific component shall be replaced only by the component specified in that documentation for safety reasons, the following symbol shall be used:



● Safety Precautions for those who Service this Unit.

When checking or adjusting the emitting power of the laser diode exercise caution in order to get safe, reliable results.

Caution:

1. During repair or tests, minimum distance of 13 cm from the focus lens must be kept.
2. During repair or tests, do not view laser beam for 10 seconds or longer.

CAUTION:

USE OF CONTROLS OR ADJUSTMENTS OR PERFORMANCE OF PROCEDURES OTHER THAN THOSE SPECIFIED HEREIN MAY RESULT IN HAZARDOUS RADIATION EXPOSURE.

CAUTION

CLASS 1M INVISIBLE LASER RADIATION WHEN OPEN. DO NOT VIEW DIRECTLY WITH OPTICAL INSTRUMENTS

WARNING!

The AEL (accessible emission level) of the laser power output is less than CLASS 1 but the laser component is capable of emitting radiation exceeding the limit for CLASS 1.

A specially instructed person should do servicing operation of the apparatus.

Laser diode characteristics

Wave length : 785 nm to 814 nm

Maximum output : 1 190 μ W(Emitting period : unlimited)

Additional Laser Caution

Transistors Q101 in PCB drive the laser diodes.

When Q101 is shorted between their terminals, the laser diodes will radiate beam.

If the top cover is removed with no disc loaded while such short-circuit is continued, the naked eyes may be exposed to the laser beam.

[Important Check Points for Good Servicing]

In this manual, procedures that must be performed during repairs are marked with the below symbol. Please be sure to confirm and follow these procedures.

1. Product safety



Please conform to product regulations (such as safety and radiation regulations), and maintain a safe servicing environment by following the safety instructions described in this manual.

- ① Use specified parts for repair.

Use genuine parts. Be sure to use important parts for safety.

- ② Do not perform modifications without proper instructions.

Please follow the specified safety methods when modification(addition/change of parts) is required due to interferences such as radio/TV interference and foreign noise.

- ③ Make sure the soldering of repaired locations is properly performed.

When you solder while repairing, please be sure that there are no cold solder and other debris. Soldering should be finished with the proper quantity. (Refer to the example)

- ④ Make sure the screws are tightly fastened.

Please be sure that all screws are fastened, and that there are no loose screws.

- ⑤ Make sure each connectors are correctly inserted.

Please be sure that all connectors are inserted, and that there are no imperfect insertion.

- ⑥ Make sure the wiring cables are set to their original state.

Please replace the wiring and cables to the original state after repairs. In addition, be sure that there are no pinched wires, etc.

- ⑦ Make sure screws and soldering scraps do not remain inside the product.

Please check that neither solder debris nor screws remain inside the product.

- ⑧ There should be no semi-broken wires, scratches, melting, etc. on the coating of the power cord.

Damaged power cords may lead to fire accidents, so please be sure that there are no damages. If you find a damaged power cord, please exchange it with a suitable one.

- ⑨ There should be no spark traces or similar marks on the power plug.

When spark traces or similar marks are found on the power supply plug, please check the connection and advise on secure connections and suitable usage. Please exchange the power cord if necessary.

- ⑩ Safe environment should be secured during servicing.

When you perform repairs, please pay attention to static electricity, furniture, household articles, etc. in order to prevent injuries. Please pay attention to your surroundings and repair safely.

2. Adjustments



To keep the original performance of the products, optimum adjustments and confirmation of characteristics within specification. Adjustments should be performed in accordance with the procedures/instructions described in this manual.

3. Lubricants, Glues, and Replacement parts



Use grease and adhesives that are equal to the specified substance. Make sure the proper amount is applied.

4. Cleaning



For parts that require cleaning, such as optical pickups, tape deck heads, lenses and mirrors used in projection monitors, proper cleaning should be performed to restore their performances.

5. Shipping mode and Shipping screws



To protect products from damages or failures during transit, the shipping mode should be set or the shipping screws should be installed before shipment. Please be sure to follow this method especially if it is specified in this manual.

CONTENTS

	SAFETY INFORMATION.....	2
	1. SERVICE PRECAUTIONS.....	5
A	1.1 SERVICE PRECAUTIONS.....	5
	1.2 NOTES ON SOLDERING.....	5
	2. SPECIFICATIONS.....	6
	2.1 SPECIFICATIONS.....	6
	2.2 DISC/CONTENT FORMAT.....	7
	2.3 PANEL FACILITIES.....	7
	2.4 CONNECTION DIAGRAM.....	9
	3. BASIC ITEMS FOR SERVICE.....	10
	3.1 CHECK POINTS AFTER SERVICING.....	10
	3.2 PCB LOCATIONS.....	10
	3.3 JIGS LIST.....	11
	3.4 CLEANING.....	11
B	4. BLOCK DIAGRAM.....	12
	5. DIAGNOSIS.....	16
	5.1 OPERATIONAL FLOWCHART.....	16
	5.2 ERROR CODE LIST.....	17
	5.3 CONNECTOR FUNCTION DESCRIPTION.....	18
	6. SERVICE MODE.....	18
	6.1 DISPLAY TEST MODE.....	18
	6.2 CD TEST MODE.....	19
	7. DISASSEMBLY.....	20
	8. EACH SETTING AND ADJUSTMENT.....	23
	8.1 CD ADJUSTMENT.....	23
	8.2 CHECKING THE GRATING AFTER CHANGING THE PICKUP UNIT.....	24
C	9. EXPLODED VIEWS AND PARTS LIST.....	26
	9.1 PACKING.....	26
	9.2 EXTERIOR(1).....	28
	9.3 EXTERIOR(2).....	30
	9.4 CD MECHANISM MODULE.....	32
	10. SCHEMATIC DIAGRAM.....	34
	10.1 TUNER AMP UNIT(GUIDE PAGE).....	34
	10.2 KEYBOARD UNIT.....	40
	10.3 CD MECHANISM MODULE(GUIDE PAGE).....	42
	10.4 WAVEFORMS.....	48
	11. PCB CONNECTION DIAGRAM.....	50
D	11.1 TUNER AMP UNIT.....	50
	11.2 KEYBOARD UNIT.....	54
	11.3 CD CORE UNIT(S10.5COMP2).....	56
	12. ELECTRICAL PARTS LIST.....	58

1. SERVICE PRECAUTIONS

1.1 SERVICE PRECAUTIONS



1. You should conform to the regulations governing the product (safety, radio and noise, and other regulations), and should keep the safety during servicing by following the safety instructions described in this manual.
2. Before disassembling the unit, be sure to turn off the power. Unplugging and plugging the connectors during power-on mode may damage the ICs inside the unit.
3. To protect the pickup unit from electrostatic discharge during servicing, take an appropriate treatment (shorting-solder) by referring to "the DISASSEMBLY".
4. After replacing the pickup unit, be sure to check the grating.
5. Be careful in handling ICs. Some ICs such as MOS type are so fragile that they can be damaged by electrostatic induction.

1.2 NOTES ON SOLDERING

- For environmental protection, lead-free solder is used on the printed circuit boards mounted in this unit.
Be sure to use lead-free solder and a soldering iron that can meet specifications for use with lead-free solders for repairs accompanied by reworking of soldering.
- Compared with conventional eutectic solders, lead-free solders have higher melting points, by approximately 40 °C.
Therefore, for lead-free soldering, the tip temperature of a soldering iron must be set to around 373 °C in general, although the temperature depends on the heat capacity of the PC board on which reworking is required and the weight of the tip of the soldering iron.

Compared with eutectic solders, lead-free solders have higher bond strengths but slower wetting times and higher melting temperatures (hard to melt/easy to harden).

The following lead-free solders are available as service parts:

- Parts numbers of lead-free solder:
GYP1006 1.0 in dia.
GYP1007 0.6 in dia.
GYP1008 0.3 in dia.

2. SPECIFICATIONS

2.1 SPECIFICATIONS

A

General

Power source..... 14.4 V DC (10.8 V to 15.1 V allowable)

Grounding system..... Negative type

Max. current consumption..... 10.0 A

Backup current 2 mA or less

Dimensions (W × H × D):

DIN

Chassis 178 mm × 50 mm × 162 mm

Nose 188 mm × 58 mm × 15 mm

D

Chassis 178 mm × 50 mm × 162 mm

Nose 170 mm × 48 mm × 15 mm

Weight 1.3 kg

B

MW tuner

Frequency range..... 531 kHz to 1 602 kHz

Usable sensitivity..... 25 µV (S/N: 20 dB)

Signal-to-noise ratio..... 62 dB (IEC-A network)

LW tuner

Frequency range..... 153 kHz to 281 kHz

Usable sensitivity..... 28 µV (S/N: 20 dB)

Signal-to-noise ratio..... 62 dB (IEC-A network)



Note

Specifications and the design are subject to modifications without notice due to improvements. ■

C

Audio

Maximum power output 50 W × 4

Continuous power output ... 22 W × 4 (50 Hz to 15 000 Hz, 5% THD, 4 Ω load, both channels driven)

Load impedance 4 Ω (4 Ω to 8 Ω allowable)

Preout max output level 2.0 V

Tone controls:

Bass

Frequency..... 100 Hz

Gain ±13 dB

Mid

Frequency..... 1 kHz

Gain ±12 dB

Treble

Frequency..... 10 kHz

Gain ±12 dB

D

CD player

System Compact disc audio system

Usable discs Compact disc

Signal-to-noise ratio..... 94 dB (1 kHz) (IEC-A network)

Number of channels 2 (stereo)

WMA decoding format Ver. 7, 7.1, 8, 9, 10, 11 (2ch audio) (Windows Media Player)

MP3 decoding format MPEG-1 & 2 Audio Layer 3

WAV signal format Linear PCM & MS ADPCM

E

FM tuner

Frequency range..... 87.5 MHz to 108.0 MHz

Usable sensitivity..... 11 dBf (0.7 µV/75 Ω , mono, S/N: 30 dB)

Signal-to-noise ratio..... 72 dB (IEC-A network)

F

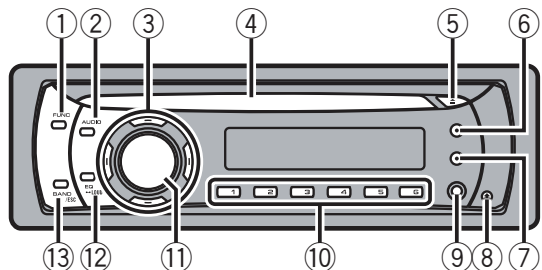
2.2 DISC/CONTENT FORMAT



2.3 PANEL FACILITIES

What's what

Head unit



- ① **FUNCTION button**
Press to recall the function menu when operating a source.
- ② **AUDIO button**
Press to select various sound quality controls.
- ③ **▲/▼/◀/▶ buttons**
Press to perform manual seek tuning, fast forward, reverse and track search controls. Also used for controlling functions.
- ④ **Disc loading slot**
Insert a disc to play.
- ⑤ **EJECT button**
Press to eject a CD from your built-in CD player.
- ⑥ **DISPLAY button**
Press to select different displays. Press and hold to scroll through the text information.
- ⑦ **TA button**
Press to turn TA function on or off. Press and hold to turn AF function on or off.
- ⑧ **DETACH button**
Press to remove the front panel from the head unit.
- ⑨ **AUX input jack (3.5 mm stereo jack)**
Use to connect an auxiliary device.

⑩ 1 to 6 buttons

Press for preset tuning.

⑪ **SOURCE button, VOLUME**

This unit is turned on by selecting a source. Press to cycle through all the available sources.

Press and hold to recall the initial setting menu when the sources are off.

Rotate it to increase or decrease the volume.

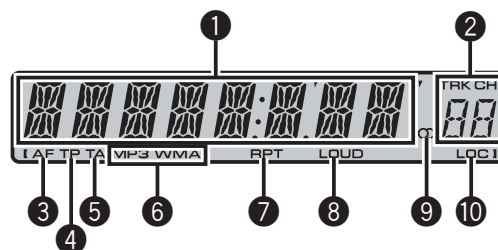
⑫ **EQ button**

Press to select various equalizer curves. Press and hold to turn loudness on or off.

⑬ **BAND button**

Press to select among MW/LW and two FM bands and cancel the control mode of functions.

Display indication



① **Main display section**

Shows the various information such as band, play time, and other setting.

- **Tuner**
Band and frequency are displayed.
- **RDS**
Program service name, PTY information and other literal information are displayed.
- **Built-in CD Player**
Elapsed playback time and literal information are displayed.

② **Preset number/track number indicator**

Shows the track number or preset number.

A

- If a track number 100 or more is selected,
▶ on the left of the track number indicator will light.

③ AF indicator

Appears when AF (alternative frequencies search) function is on.

④ TP indicator

Appears when a TP station is tuned in.

⑤ TA indicator

Appears when TA (traffic announcement standby) function is on.

⑥ MP3/WMA indicator

⑦ RPT indicator

Shows when repeat play is turned on.

⑧ LOUD indicator

Appears when loudness is on.

⑨ (stereo) indicator

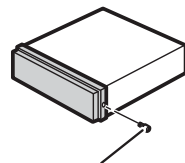
Appears when the selected frequency is being broadcast in stereo.

⑩ LOC indicator

Appears when local seek tuning is on. 

Fastening the front panel

If you do not plan to detach the front panel, the front panel can be fastened with supplied screw.



Screw
BPZ20P080FTC



B

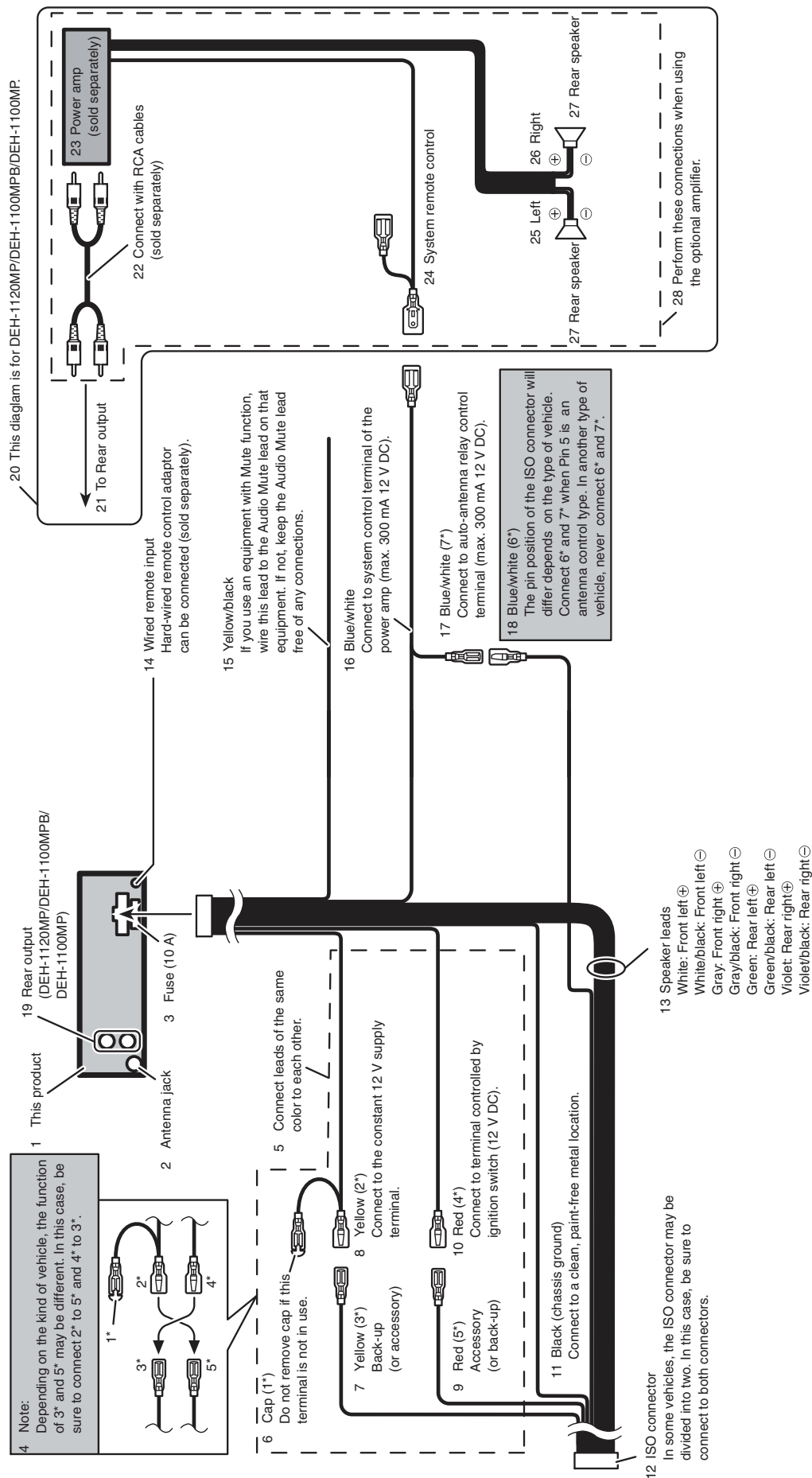
C

D

E

F

2.4 CONNECTION DIAGRAM



3. BASIC ITEMS FOR SERVICE

3.1 CHECK POINTS AFTER SERVICING

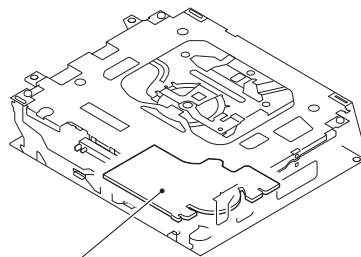
To keep the product quality after servicing, please confirm following check points.

No.		Procedures	Item to be confirmed
1		Confirm whether the customer complain has been solved. If the customer complain occurs with the specific media, use it for the operation check.	The customer complain must not be reappeared. Display, audio and operations must be normal.
2	CD	Play back a CD. (Track search)	No malfunction on display, audio and operation.
3	FM/AM tuner	Check FM/AM tuner action. (Seek, Preset) Switch band to check both FM and AM.	Display, audio and operations must be normal.
4		Check whether no disc is inside the product.	The media used for the operating check must be ejected.
5		Appearance check	No scratches or dirt on its appearance after receiving it for service.

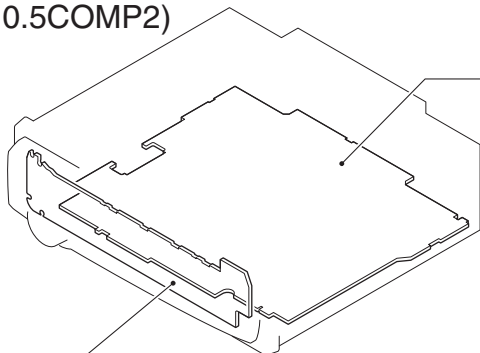
See the table below for the items to be checked regarding audio:

Item to be checked regarding audio
Distortion
Noise
Volume too low
Volume too high
Volume fluctuating
Sound interrupted

3.2 PCB LOCATIONS



C CD Core Unit (S10.5COMP2)



A Tuner Amp Unit

B Keyboard Unit

Unit Number : QWM3032
 Unit Name : Tuner Amp Unit
 Unit Number : (1120MP)
 Unit Name : Keyboard Unit

Unit Number : (1100MP)
 Unit Number : (1100MPB)
 Unit Name : Keyboard Unit
 Unit Number : CWX3514
 Unit Name : CD Core Unit(S10.5COMP2)

3.3 JIGS LIST

● Jigs List

Name	Jig No.	Remarks
Test Disc	TCD-782	Checking the grating
L.P.F.		Checking the grating (Two pieces)

● Grease List

Name	Grease No.	Remarks
Grease	GEM1024	CD Mechanism Module
Grease	GEM1045	CD Mechanism Module

3.4 CLEANING

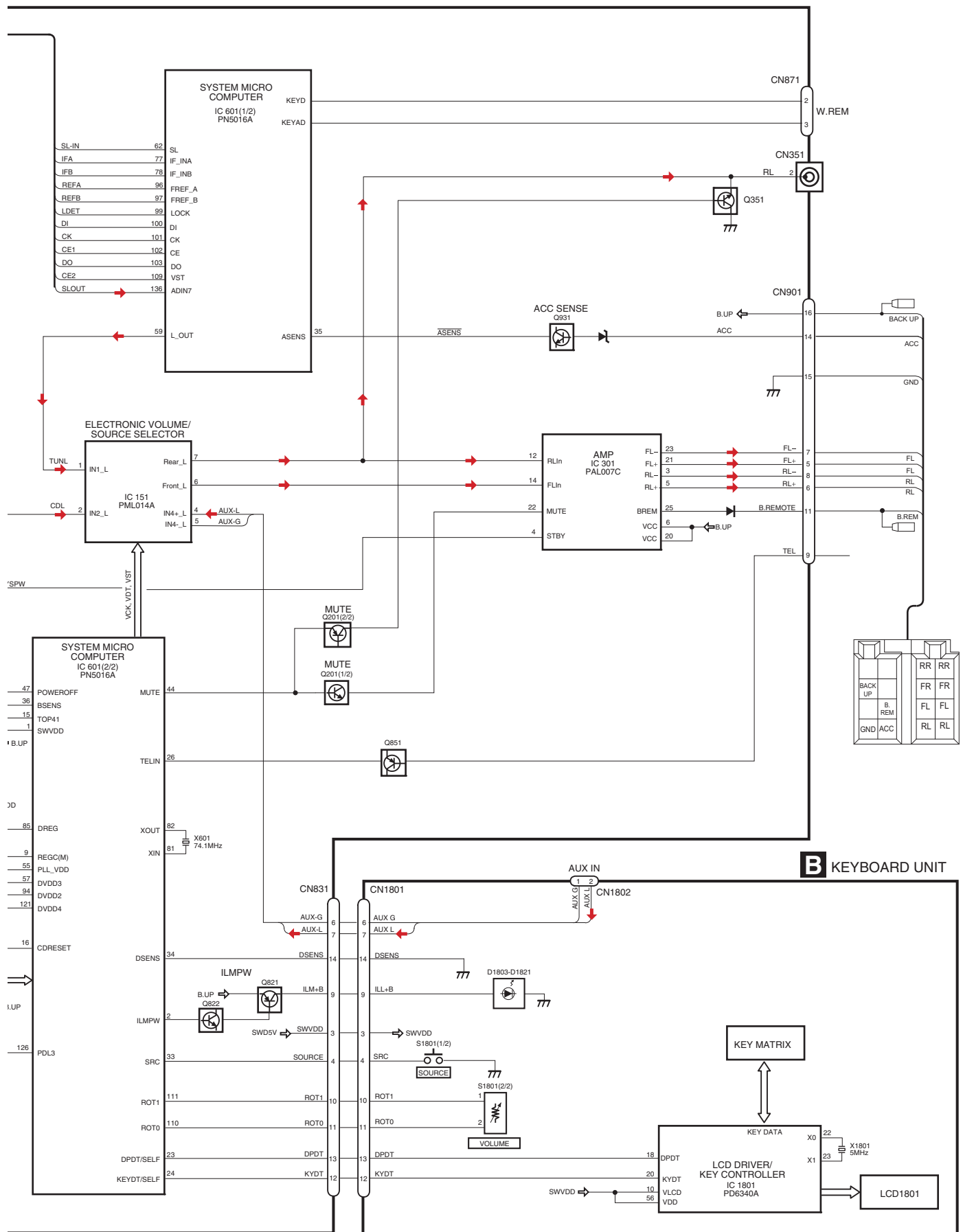


Before shipping out the product, be sure to clean the following portions by using the prescribed cleaning tools:

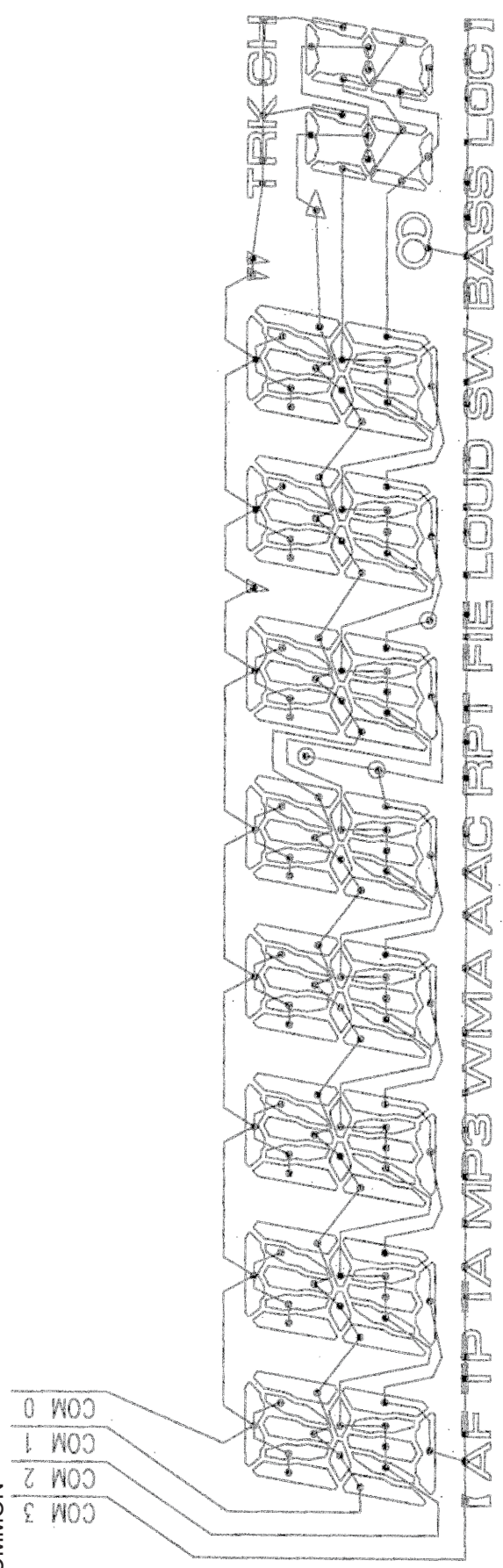
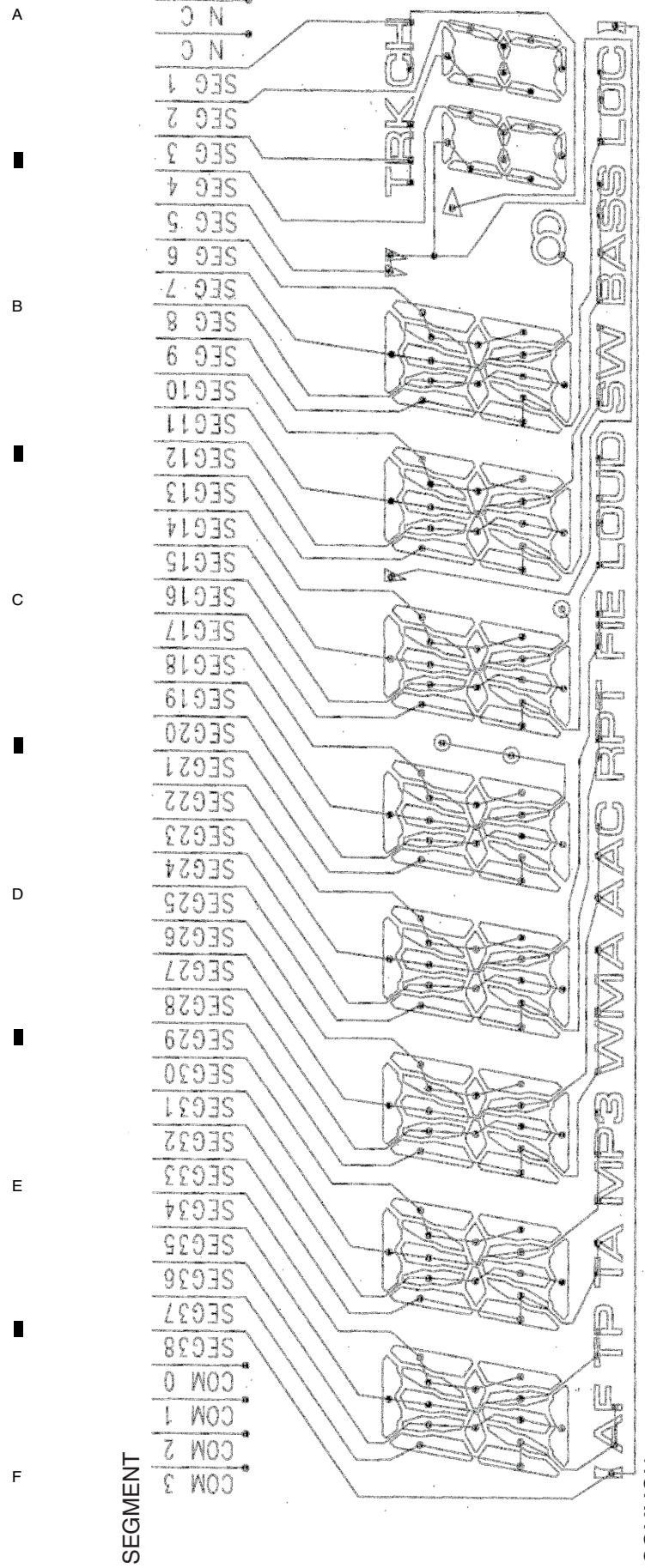
Portions to be cleaned	Cleaning tools
CD pickup lenses	Cleaning liquid : GEM1004 Cleaning paper : GED-008

4

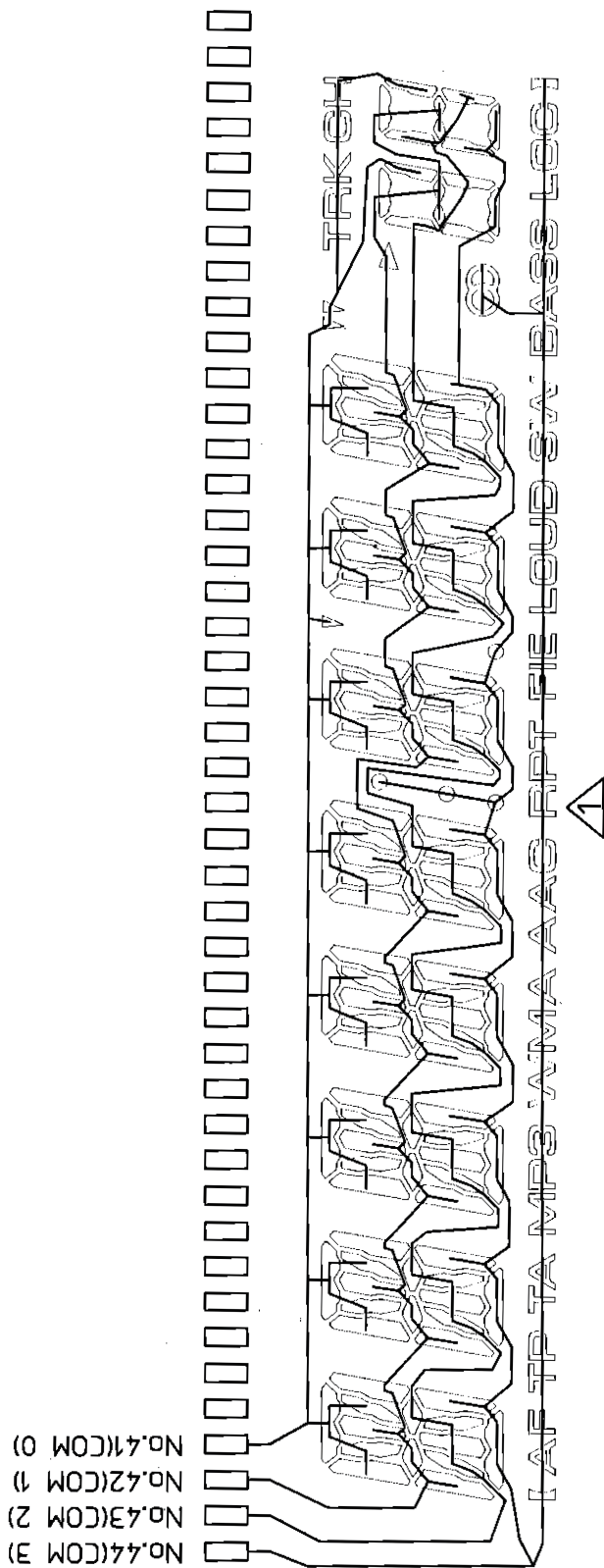
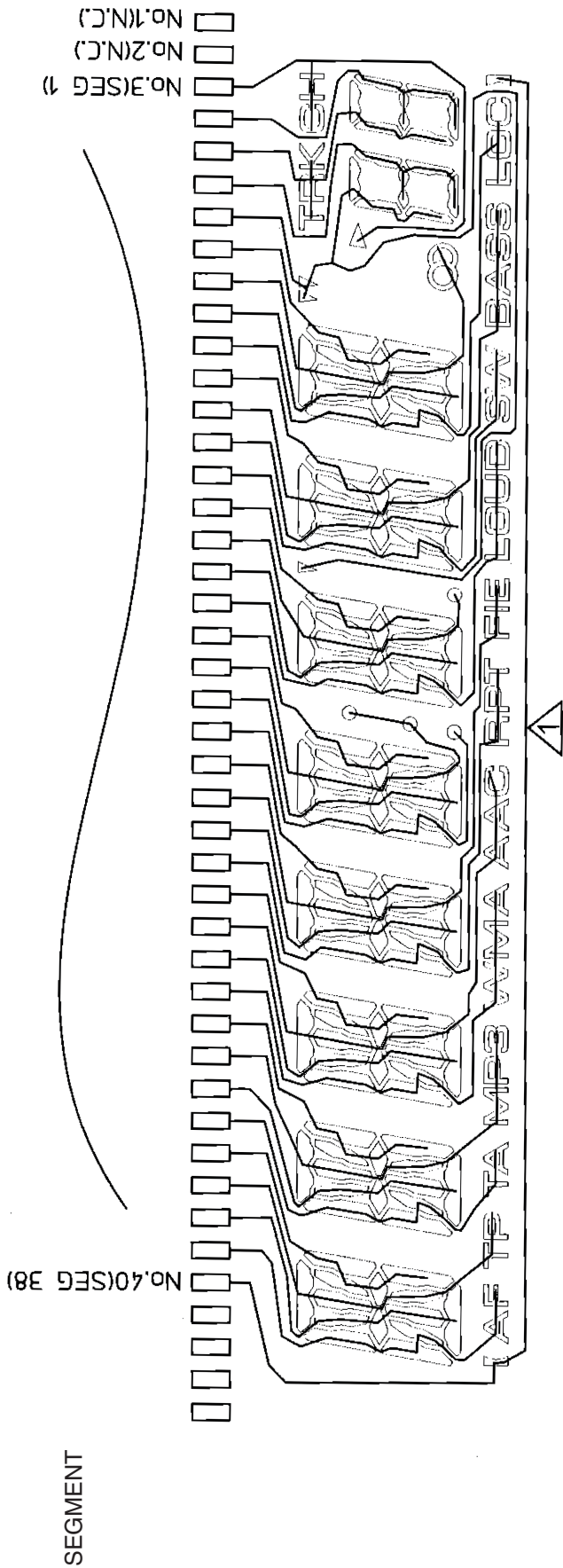




LCD (CAW1927)



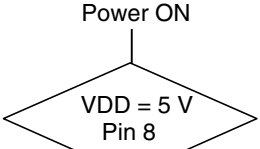
LCD (CAW1932)



5. DIAGNOSIS

5.1 OPERATIONAL FLOWCHART

A

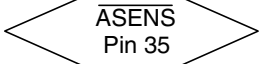


■



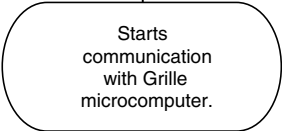
B

$\overline{\text{BSENS}} = \text{L}$

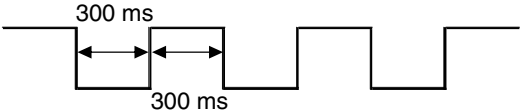
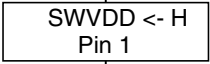


■

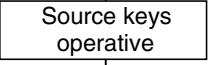
$\overline{\text{ASENS}} = \text{L}$



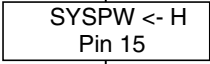
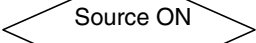
C



In case of the above signal, the communication
with Grille microcomputer may fail.
If the time interval is not 300 msec, the oscillator
may be defective.



D



Completes power-on operation.
(After that, proceed to each source operation)

E

■

F

5.2 ERROR CODE LIST

● Error Messages

If a CD is not operative or stopped during operation due to an error, the error mode is turned on and cause(s) of the error is indicated with a corresponding number. This arrangement is intended at reducing nonsense calls from the users and also for facilitating trouble analysis and repair work in servicing.

(1) Basic Indication Method

1) When SERRORM is selected for the CSMOD (CD mode area for the system), error codes are written to DMIN (minutes display area) and DSEC (seconds display area). The same data is written to DMIN and DSEC. DTNO remains in blank as before.

2) Head unit display examples

Depending on display capability of LCD used, display will vary as shown below. xx contains the error number.

8-digit display	6-digit display	4-digit display
ERROR-xx	ERR-xx	E-xx

(2) Error Code List

Code	Class	Displayed error code	Description of the code and potential cause(s)
10	Electricity	Carriage Home NG SERVO LSI Com- munication Error	CRG can't be moved to inner diameter. CRG can't be moved from inner diameter. -> Failure on home switch or CRG move mechanism. Communication error between microcomputer and SERVO LSI.
11	Electricity	Focus Servo NG	Focusing not available. -> Stains on rear side of disc or excessive vibrations on REWRITABLE.
12	Electricity	Spindle Lock NG Subcode NG	Spindle not locked. Sub-code is strange (not readable). -> Failure on spindle, stains or damages on disc, or excessive vibrations. A disc not containing CD-R data is found. Turned over disc are found, though rarely. CD signal error.
17	Electricity	Setup NG	AGC protection doesn't work. Focus can be easily lost. -> Damages or stains on disc, or excessive vibrations on REWRITABLE.
30	Electricity	Search Time Out	Failed to reach target address. -> CRG tracking error or damages on disc.
44	Electricity	ALL Skip	Skip setting for all track. (CD-R/RW)
50	Mechanism	CD On Mech Error	Mechanical error during CD ON. -> Defective loading motor, mechanical lock and mechanical sensor.
A0	System	Power Supply NG	Power (VD) is ground faulted. -> Failure on SW transistor or power supply (failure on connector).

Remarks: Mechanical errors are not displayed (because a CD is turned off in these errors).

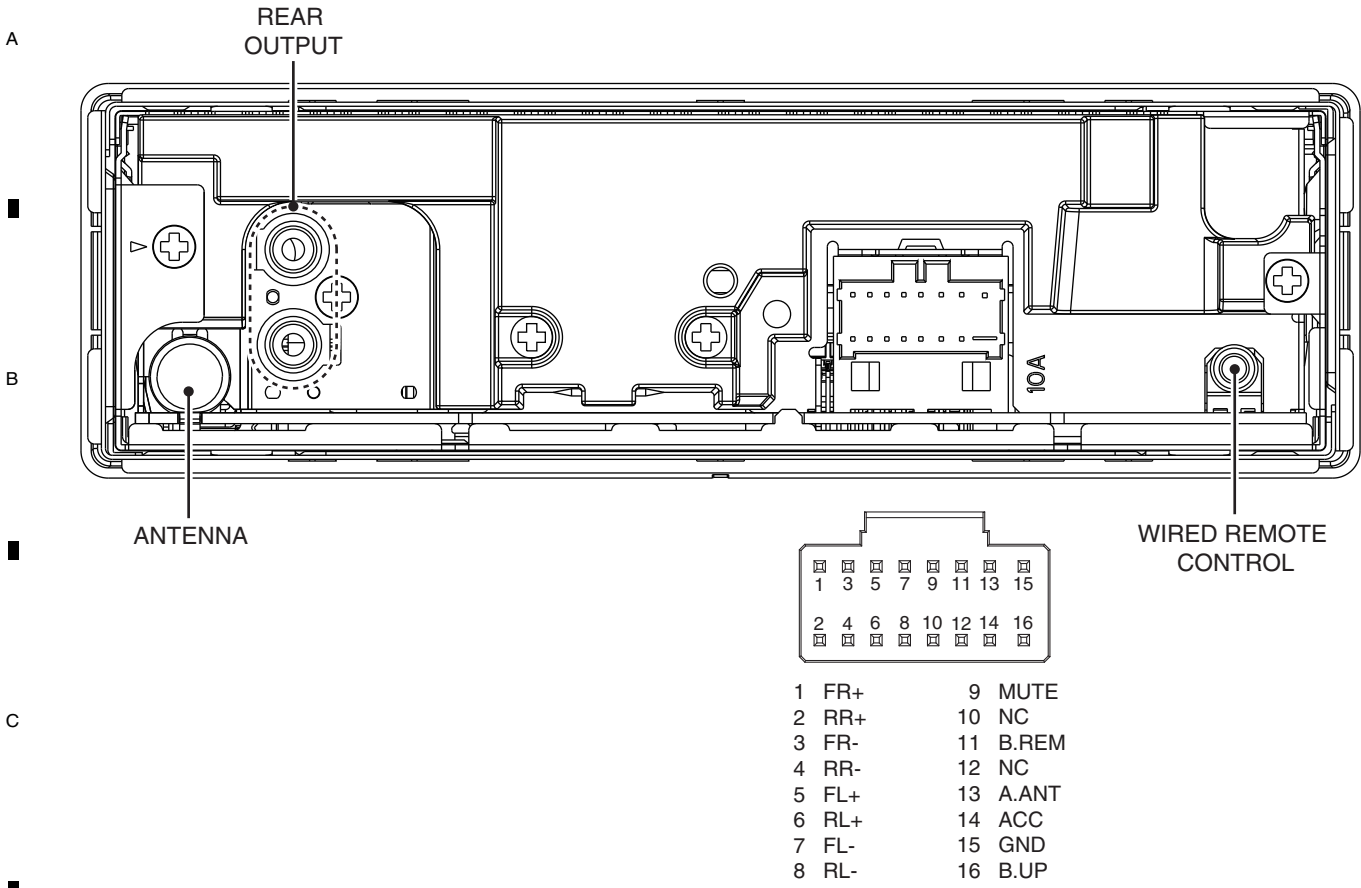
Unreadable TOC does not constitute an error. An intended operation continues in this case.

Upper digits of an error code are subdivided as shown below:

1x: Setup relevant errors, 3x: Search relevant errors, Ax: Other errors.

1 2 3 4

5.3 CONNECTOR FUNCTION DESCRIPTION



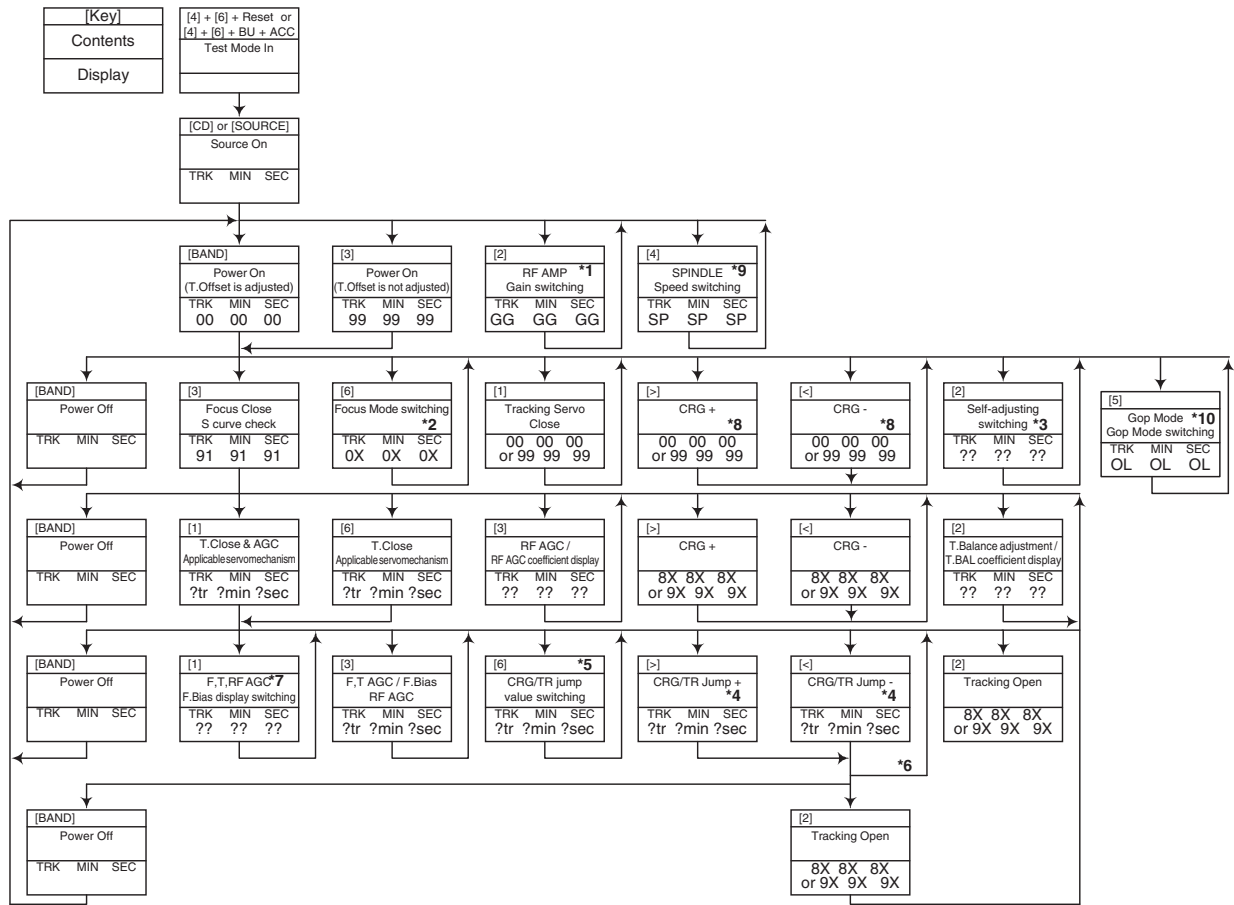
6. SERVICE MODE

6.1 DISPLAY TEST MODE

- D
- 1. To enter the test mode**
- Turn on ACC and Backup while pressing the 1 and the 3 buttons together.
- 2. To exit from the test mode**
- Turn off the ACC and Backup.
- 3. Operation method**
- Change display as follows by pushing the 1 and the 3 buttons together.
- All lighting of display
↓
ROM Correction version display
- E
- F

6.2 CD TEST MODE

● Flow Chart



*1) TYP → + 6 dB → + 12 dB
 TRK MIN SEC → TRK₀₆MIN₀₆SEC₀₆ → TRK₁₂MIN₁₂SEC₁₂

*2) Focus Close → S Curve check setting → F EQ measurement setting
 TRK₀₀MIN₀₀SEC₀₀ → TRK₀₁MIN₀₁SEC₀₁ → TRK₀₂MIN₀₂SEC₀₂
 (TRK₉₉MIN₉₉SEC₉₉)

*3) F.Offset Display → RF.Offset → T.Offset Display → Switch to the order of the original display

*4) 1TR/4TR/10TR/32TR/100TR

*5) Single → 4TR → 10TR → 32TR → 100TR → CRG Move
 9x(8x):91(81) 92(82) 93(83) 94(84) 95(85) 96(86)

*6) Only at the time of CRG move, 100TR jump

*7) TRK/MIN/SEC → F.AGC → T.AGC Gain → F.Bias → RF AGC

*8) CRG motor voltage = 2 [V]

*9) TYP (1X) → 2X → 1X
 TRK MIN SEC → TRK₂₂MIN₂₂SEC₂₂ → TRK₁₁MIN₁₁SEC₁₁

*10) OFF(TYP) → FORCUS → TRACKING
 TRK MIN SEC → TRK₇₀MIN₇₀SEC₇₀ → TRK₇₁MIN₇₁SEC₇₁

• As for the double speed (2x), audio output cannot be supported

- *1) After the [Eject] key is pressed keys other than the [Eject] key should not be pressed, until disc ejection is complete.
- When the key [2] or [3] is pressed during the Focus Search, the power supply should be immediately turned off (otherwise the lens sticks to Wall, causing the actuator to be damaged).
- In the case of TR jump other than to 100TR, the function shall continue to be processed even if the TR jump key is released. As for the CRG Move and 100TR Jump, the mechanism shall be set to the Tracking Close mode when the key is released.
- When the power is turned on/off the jump mode is reset to the Single TR (91) while the gain of the RFAMP is reset to 0 dB. At the same time all the self-adjusting values shall return to the default setting.

7. DISASSEMBLY

While the photograph shown is slightly different from this model in shape, the disassembly procedure is the same.

●Removing the Case (not shown)

1. Remove the Case.

●Removing the CD Mechanism Module (Fig.1)

- 1 Release the two latches and then remove the Panel Assy.

- 2 Remove the four screws.

Disconnect the connector and then remove the CD Mechanism Module.

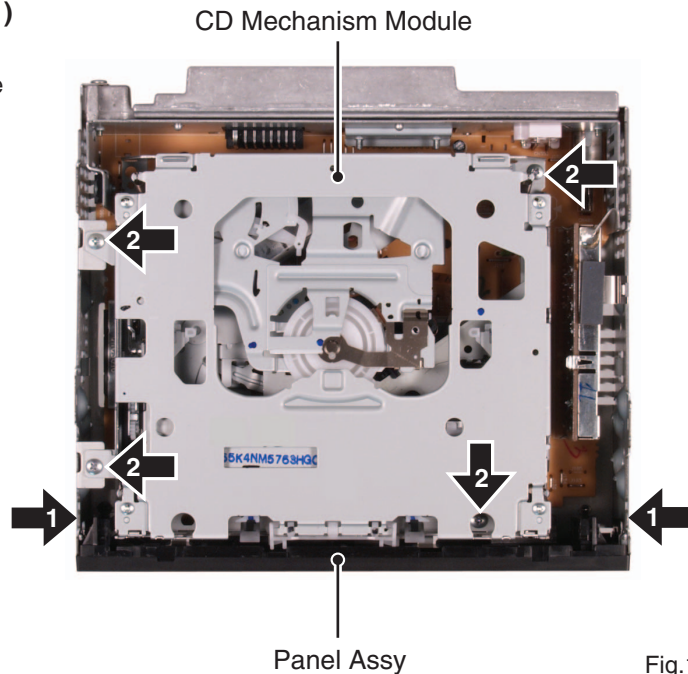


Fig.1

●Removing the Tuner Amp Unit (Fig.2)

- 1 Remove the screw.

- 2 Remove the screw.

- 3 Remove the two screws.

- 4 Remove the two screws.

- 5 Straighten the tabs at two locations indicated and then remove the Tuner Amp Unit.

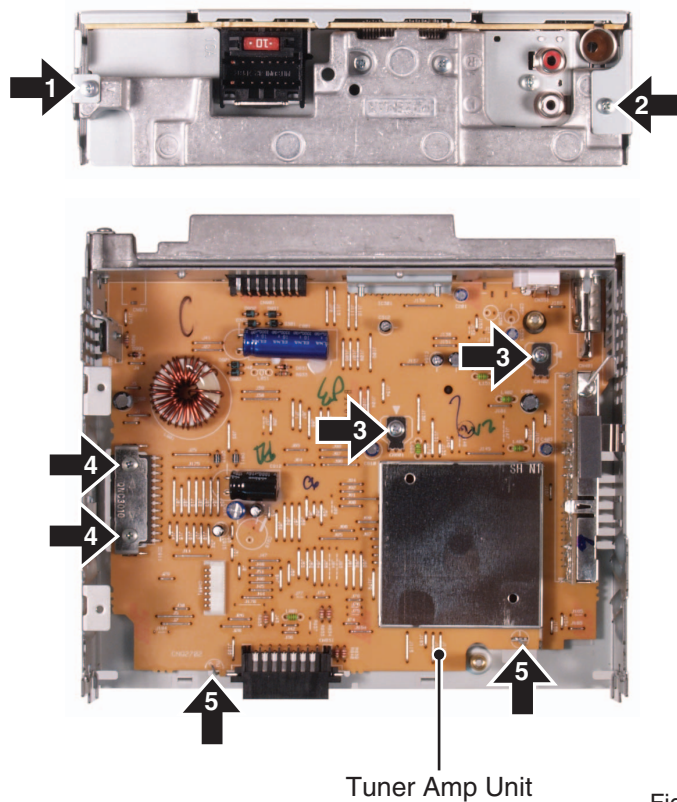
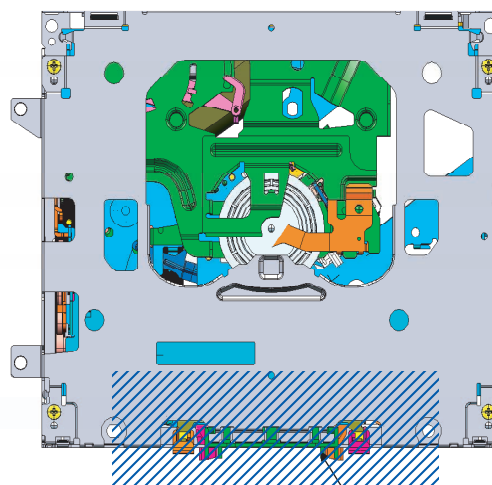


Fig.2

● How to hold the Mechanism Unit

1. Hold the Upper and Lower Frames.
2. Do not hold the front portion of the Upper Frame, because it is not very solid.

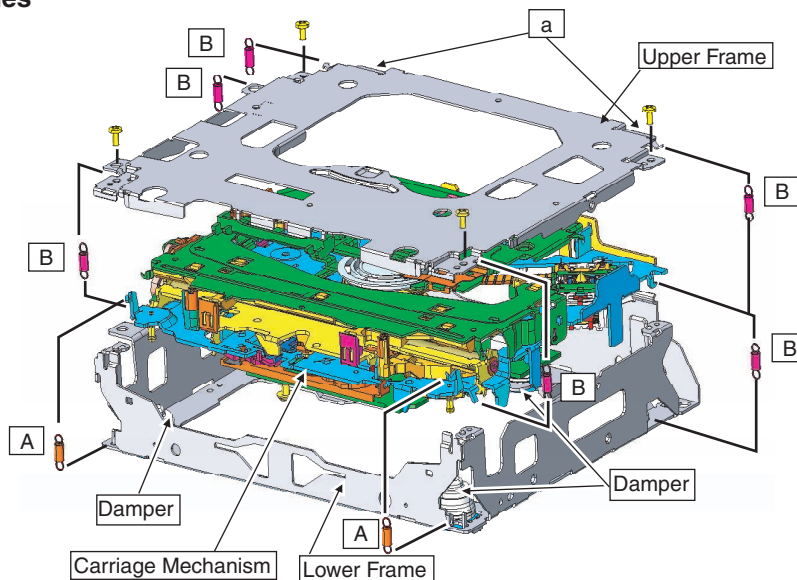


Do not squeeze this area.

● Removing the Upper and Lower Frames

1. With a disc inserted and clamped in the mechanism, remove the two Springs (A), the six Springs (B), and the four Screws.
2. Turn the Upper Frame using the part "a" as a pivot, and remove the Upper Frame.
3. While lifting the Carriage Mechanism, remove it from the three Dampers.

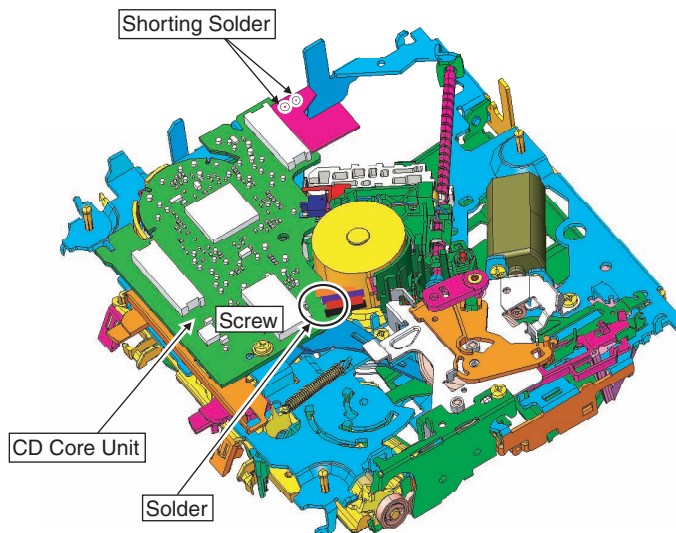
Caution: When assembling, be sure to apply some alcohol to the Dampers and assemble the mechanism in a clamped state.



● How to remove the CD Core Unit

1. Apply Shorting Solder to the flexible cable of the Pickup, and disconnect it from the connector.
2. Unsolder the four leads, and loosen the Screw.
3. Remove the CD Core Unit.

Caution: When assembling the CD Core Unit, assemble it with the SW in a clamped state so as not to damage it.

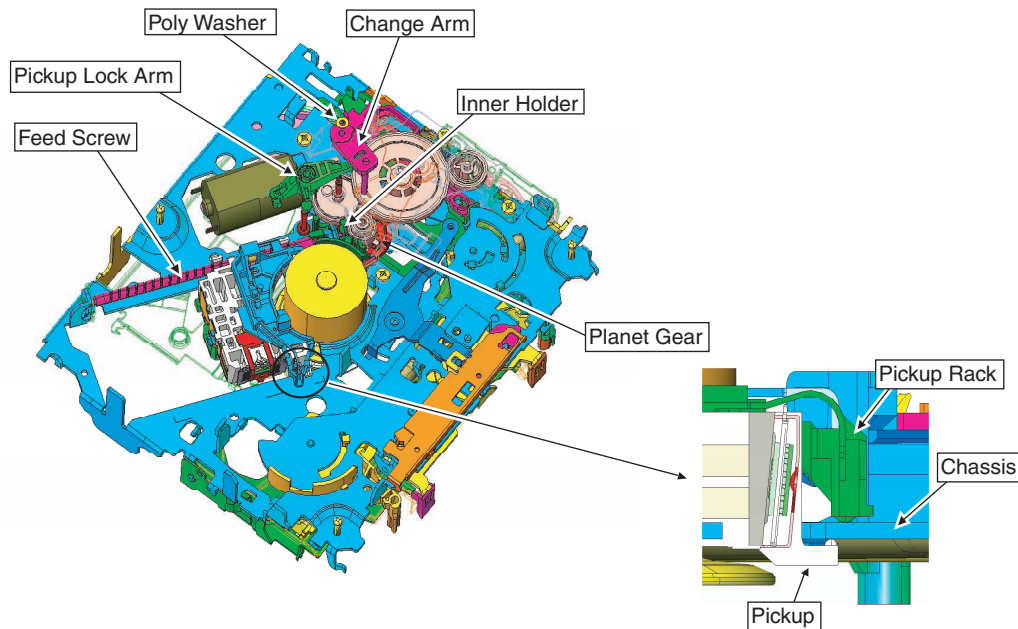


● How to remove the Pickup Unit

1. Make the system in the carriage mechanism mode, and have it clamped.
2. Remove the CD Core Unit and remove the leads from the Inner Holder.
3. Remove the Poly Washer, Change Arm, and Pickup Lock Arm.
4. While releasing from the hook of the Inner Holder, lift the end of the Feed Screw.

Caution: When assembling, move the Planet Gear to the load/eject position before setting the Feed Screw in the Inner Holder.

Assemble the sub unit side of the Pickup, taking the plate (Chassis) in-between. When treating the leads of the Load Carriage Motor Assy, do not make them loose over the Feed Screw.



8. EACH SETTING AND ADJUSTMENT

8.1 CD ADJUSTMENT

1) Cautions on adjustments

- In this product the single voltage (3.3 V) is used for the regulator. The reference voltage is the REFO1 (1.65 V) instead of the GND.

If you should mistakenly short the REFO1 with the GND during adjustment, accurate voltage will not be obtained, and the servo's misoperation will apply excessive shock to the pickup. To avoid such problems:

a. Do not mix up the REFO1 with the GND when connecting the (-) probe of measuring instruments. Especially on an oscilloscope, avoid connecting the (-) probe for CH1 to the GND.

b. In many cases, measuring instruments have the same potential as that for the (-) probe. Be sure to set the measuring instruments to the floating state.

c. If you have mistakenly connected the REFO1 to the GND, turn off the regulator or the power immediately.

- Before mounting and removing filters or leads for adjustment, be sure to turn off the regulator.

- For stable circuit operation, keep the mechanism operating for about one minute or more after the regulator is turned on.

- In the test mode, any software protections will not work. Avoid applying any mechanical or electrical shock to the mechanism during adjustment.

- The RFI and RFO signals with a wide frequency range are easy to oscillate. When observing the signals, insert a resistor of 1k ohms in series.

- The load and eject operation is not guaranteed with the mechanism upside down. If the mechanism is blocked due to mistaken eject operation, reset the product or turn off and on the ACC to restore it.

2) Test mode

This mode is used to adjust the CD mechanism module.

- To enter the test mode.

While pressing the 4 and 6 keys at the same time, reset.

- To exit from the test mode.

Turn off the ACC and back up.

Notes:

a. During ejection, do not press any other keys than the EJECT key until the loaded disc is ejected.

b. If you have pressed the (->) key or (<-) key during focus search, turn off the power immediately to protect the actuator from damage caused by the lens stuck.

c. For the TR jump modes except 100TR, the track jump operation will continue even if the key is released.

d. For the CRG move and 100TR jump modes, the tracking loop will be closed at the same time when the key is released.

e. When the power is turned off and on, the jump mode is reset to the single TR (91), the RF amp gain is set to 0 dB, and the auto-adjustment values are reset to the default settings.

8.2 CHECKING THE GRATING AFTER CHANGING THE PICKUP UNIT



- Note :

The grating angle of the PU unit cannot be adjusted after the PU unit is changed. The PU unit in the CD mechanism module is adjusted on the production line to match the CD mechanism module and is thus the best adjusted PU unit for the CD mechanism module. Changing the PU unit is thus best considered as a last resort. However, if the PU unit must be changed, the grating should be checked using the procedure below.

- Purpose :

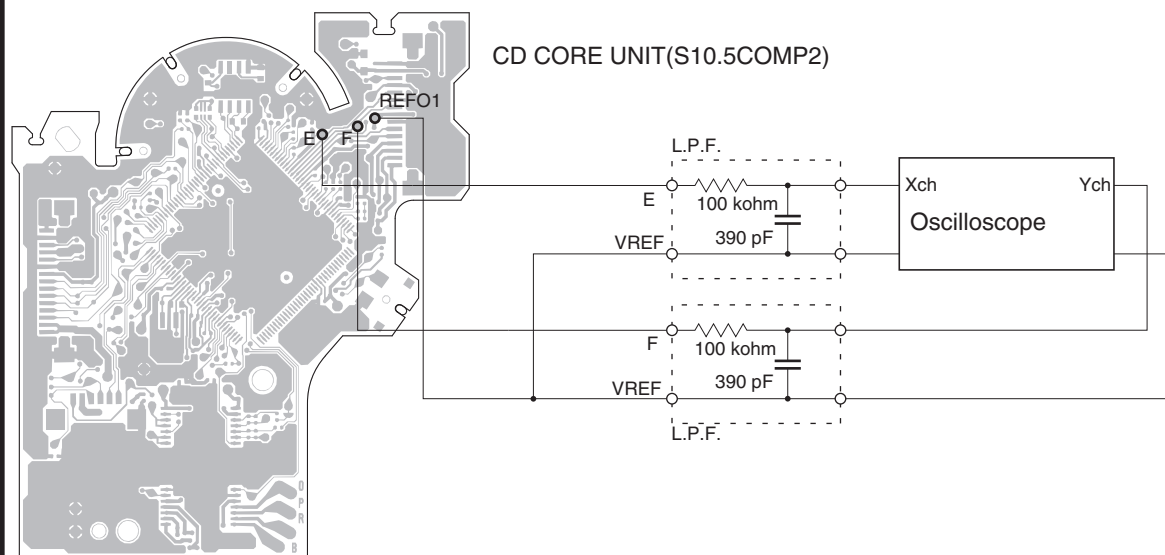
To check that the grating is within an acceptable range when the PU unit is changed.

- Symptoms of Mal-adjustment :

If the grating is off by a large amount symptoms such as being unable to close tracking, being unable to perform track search operations, or taking a long time for track searching.

- Method :

- | | |
|-----------------------|----------------------------|
| • Measuring Equipment | • Oscilloscope, Two L.P.F. |
| • Measuring Points | • E, F, REFO1 |
| • Disc | • TCD-782 |
| • Mode | • TEST MODE |



- Checking Procedure

1. In test mode, load the disc and switch the 3 V regulator on.
2. Using the -> and <- buttons, move the PU unit to the innermost track.
3. Press key 3 to close focus, the display should read "91". Press key 2 to implement the tracking balance adjustment the display should now read "81". Press key 3. The display will change, returning to "81" on the fourth press.
4. As shown in the diagram above, monitor the LPF outputs using the oscilloscope and check that the phase difference is within 75 degrees. Refer to the photographs supplied to determine the phase angle.
5. If the phase difference is determined to be greater than 75 degrees try changing the PU unit to see if there is any improvement. If, after trying this a number of times, the grating angle does not become less than 75 degrees then the mechanism should be judged to be at fault.

- Note

Because of eccentricity in the disc and a slight misalignment of the clamping center the grating waveform may be seen to "wobble" (the phase difference changes as the disc rotates). The angle specified above indicates the average angle.

- Hint

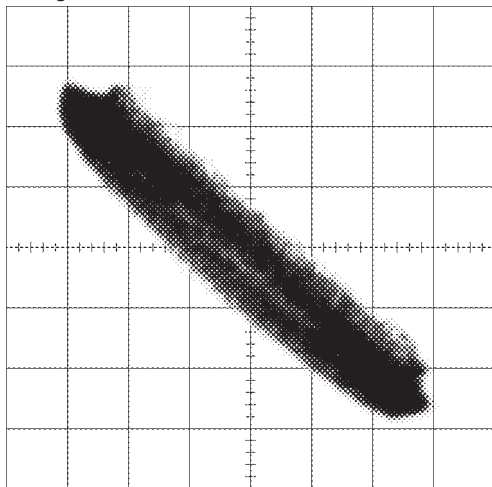
Reloading the disc changes the clamp position and may decrease the "wobble".

Grating waveform

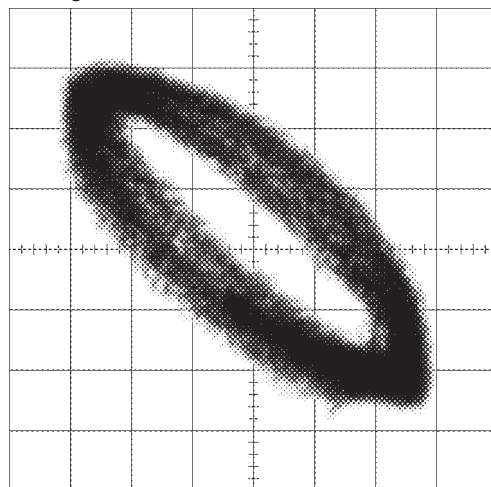
Ech -> Xch 20 mV/div, AC

Fch -> Ych 20 mV/div, AC

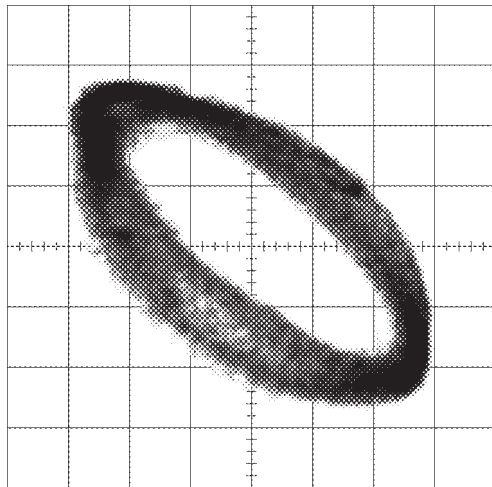
0 degrees



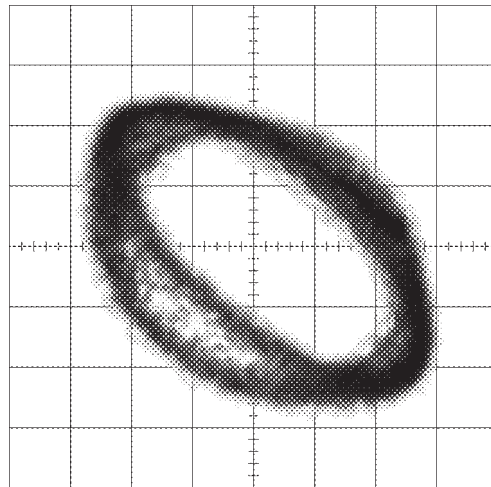
30 degrees



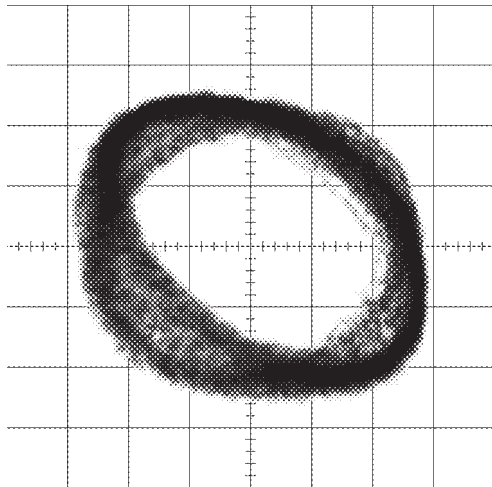
45 degrees



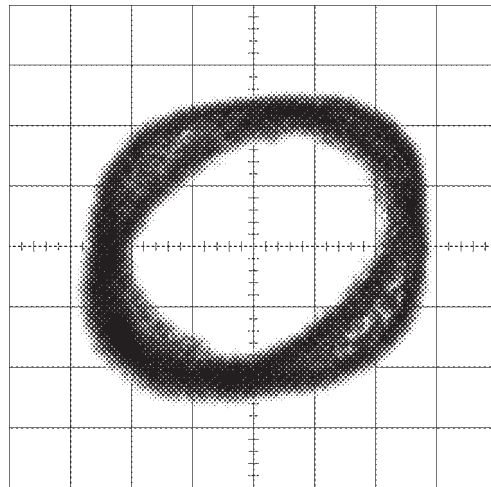
60 degrees



75 degrees



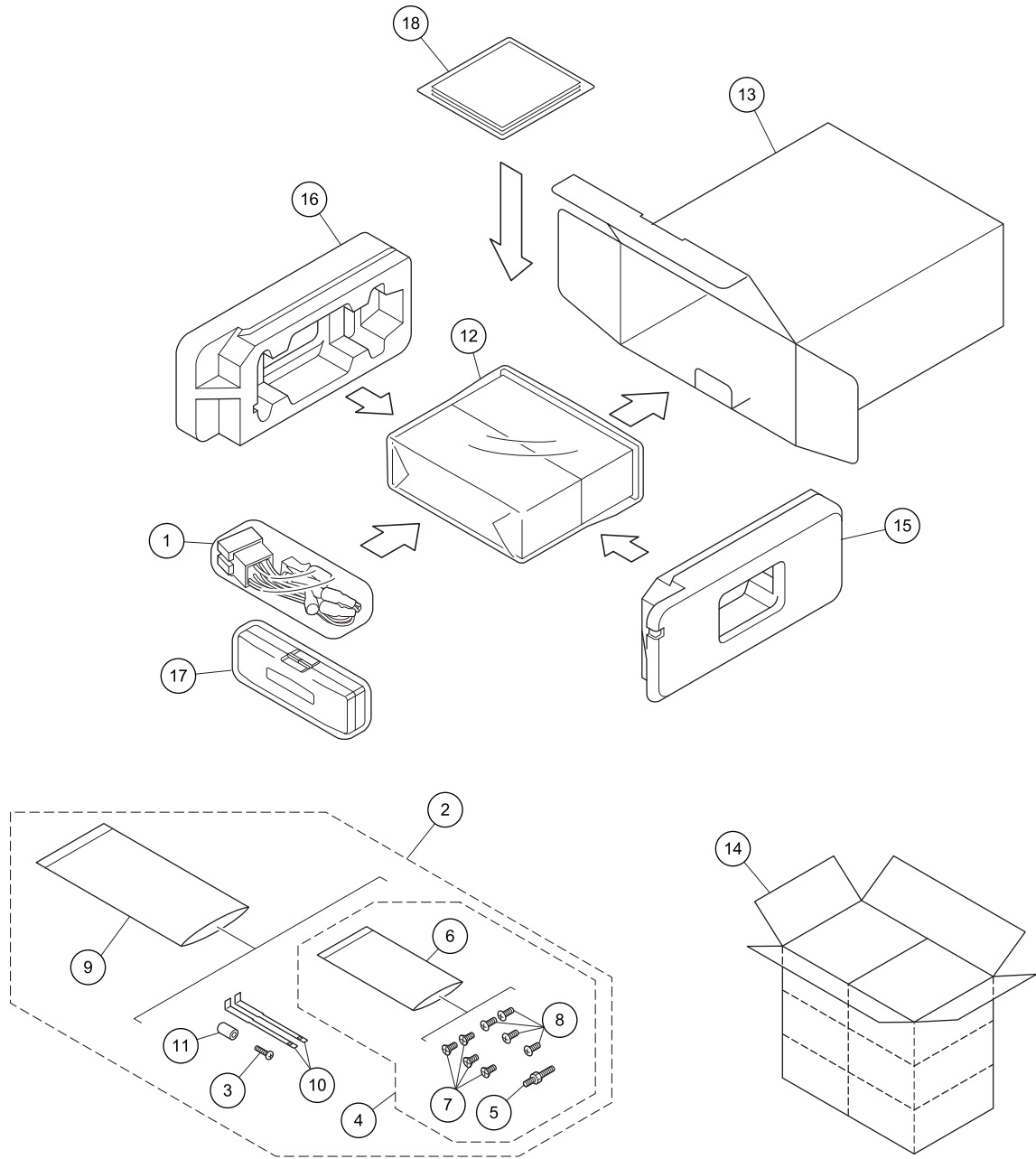
90 degrees



9. EXPLODED VIEWS AND PARTS LIST

- NOTES :
- Parts marked by " * " are generally unavailable because they are not in our Master Spare Parts List.
 - The  mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
 - Screw adjacent to  mark on the product are used for disassembly.
 - For the applying amount of lubricants or glue, follow the instructions in this manual.
- (In the case of no amount instructions, apply as you think it appropriate.)

9.1 PACKING



	5		6		7		8	
(1) PACKING SECTION PARTS LIST								
Mark	No.	Description	Part No.	Mark	No.	Description	Part No.	
	1	Cord Assy	CDP1015		11	Bush	CNV3930	
	2	Accessory Assy	CEA6707		12	Polyethylene Bag	CEG-162	A
	3	Screw	BPZ20P080FTC		13	Unit Box	See Contrast table(2)	
	4	Screw Assy	CEA3849		14	Contain Box	See Contrast table(2)	
	5	Screw	CBA1650		15	Protector	YHP5050	
*	6	Polyethylene Bag	CEG-127		16	Protector	YHP5051	
	7	Screw	CRZ50P090FTC		17	Case Assy	YXB5009	
	8	Screw	TRZ50P080FTC	*	18-1	Warranty Card	CRY1279	
	9	Polyethylene Bag	CEG1160		18-2	Owner's Manual	QRD3013	
	10	Handle	CND3707		18-3	Installation Manual	QRD3015	

(2) CONTRAST TABLE

DEH-1100MPB/XN/EW5, DEH-1100MP/XN/EW5 and DEH-1120MP/XN/EW5 are constructed the same except for the following:

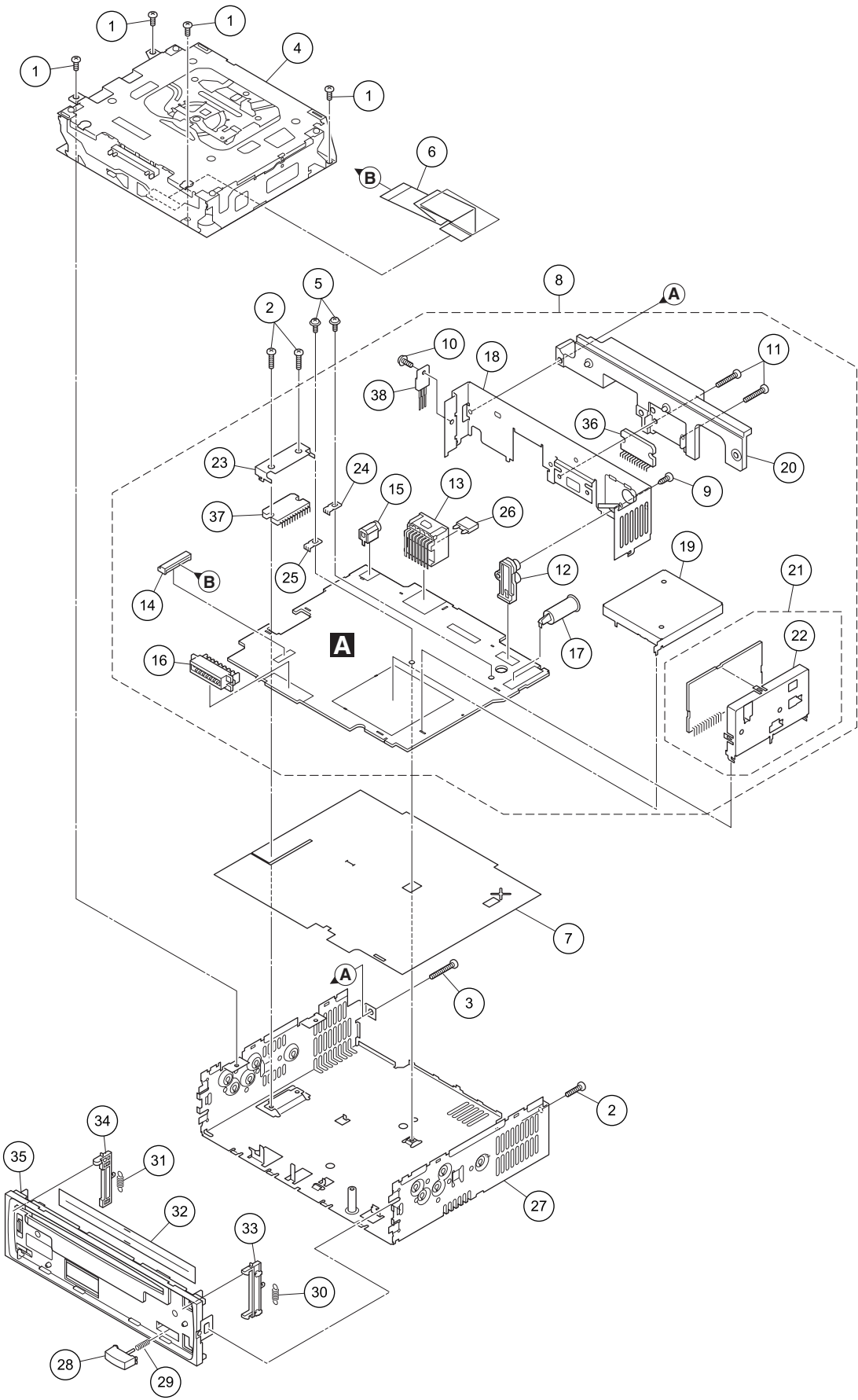
Mark	No.	Description	DEH-1100MPB/XN/EW5	DEH-1100MP/XN/EW5	DEH-1120MP/XN/EW5
	13	Unit Box	QHG3018	QHG3015	QHG3017
	14	Contain Box	QHL3018	QHL3015	QHL3017

Owner's Manual, Installation Manual

Part No.	Language
QRD3013	English, Spanish(Espanol), German, French, Italian, Dutch, Russian
QRD3015	English, Spanish(Espanol), German, French, Italian, Dutch, Russian

1 2 3 4

9.2 EXTERIOR(1)



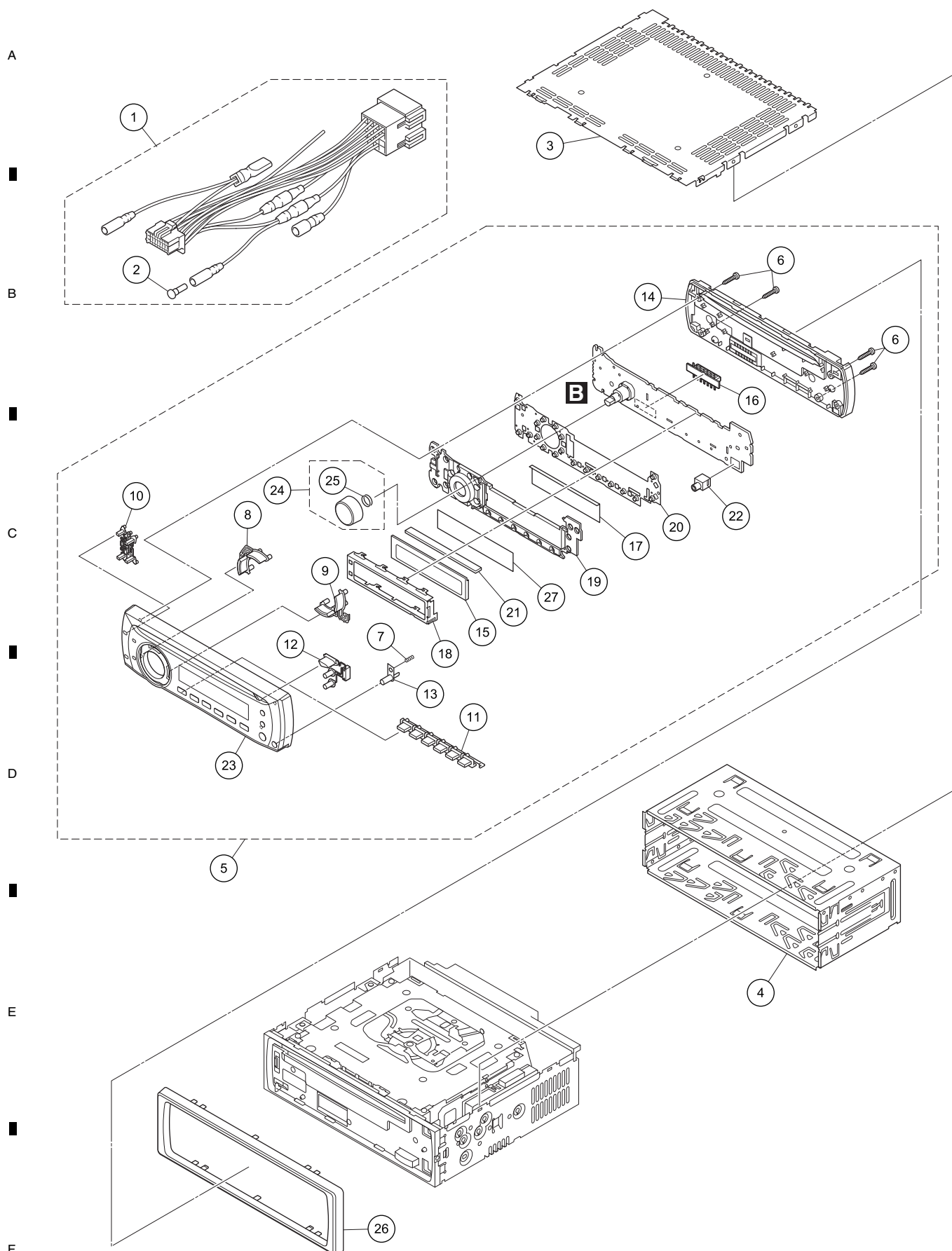
Mark No.	Description	Part No.	Mark No.	Description	Part No.	
1	Screw	BSZ26P060FTC	21	FM/AM Tuner Unit	CWE2106	A
2	Screw	BSZ26P100FTC	22	Holder	CND3466	
3	Screw	BSZ26P180FTC	23	Holder	QNC3010	
4	CD Mechanism Module(S10.5)	CXK5763	24	Terminal(CN402)	VNF1084	
5	Screw	ISS26P055FTC	25	Terminal(CN601)	VNF1084	
6	Cable	QDE3003	⚠ 26	Fuse(10 A)	YEK5001	B
7	Insulator	QNM3015		27	Chassis Unit	See Contrast table(2)
8	Tuner Amp Unit	QWM3032		28	Button	CAC4836
9	Screw	BPZ26P080FTC		29	Spring	CBH2367
10	Screw	BSZ26P060FTC		30	Spring(Silver)	CBH2961
11	Screw	BSZ26P160FTC	31	Spring(Black)	CBH2962	C
12	Pin Jack(CN351)	CKB1057	32	Cover	CNN1665	
13	Plug(CN901)	CKM1376	33	Arm	CNV9311	
14	Connector(CN651)	CKS3829	34	Arm	CNV9312	
15	Connector(CN871)	CKS4124	35	Panel	QNS3023	
16	Connector(CN831)	CKS5664	36	IC(IC301)	PAL010A	D
17	Antenna Jack(CN401)	CKX1070	37	IC(IC911)	BA49181-V12	
18	Holder	CND3705	38	Transister(Q991)	2SD2396	
19	Holder	CND3706				
20	Heat Sink	CNR1668				

(2) CONTRAST TABLE

DEH-1100MPB/XN/EW5, DEH-1100MP/XN/EW5 and DEH-1120MP/XN/EW5 are constructed the same except for the following:

Mark	No.	Description	DEH-1100MPB/XN/EW5	DEH-1100MP/XN/EW5	DEH-1120MP/XN/EW5
	27	Chassis Unit	QXA3068	QXA3066	QXA3067

9.3 EXTERIOR(2)

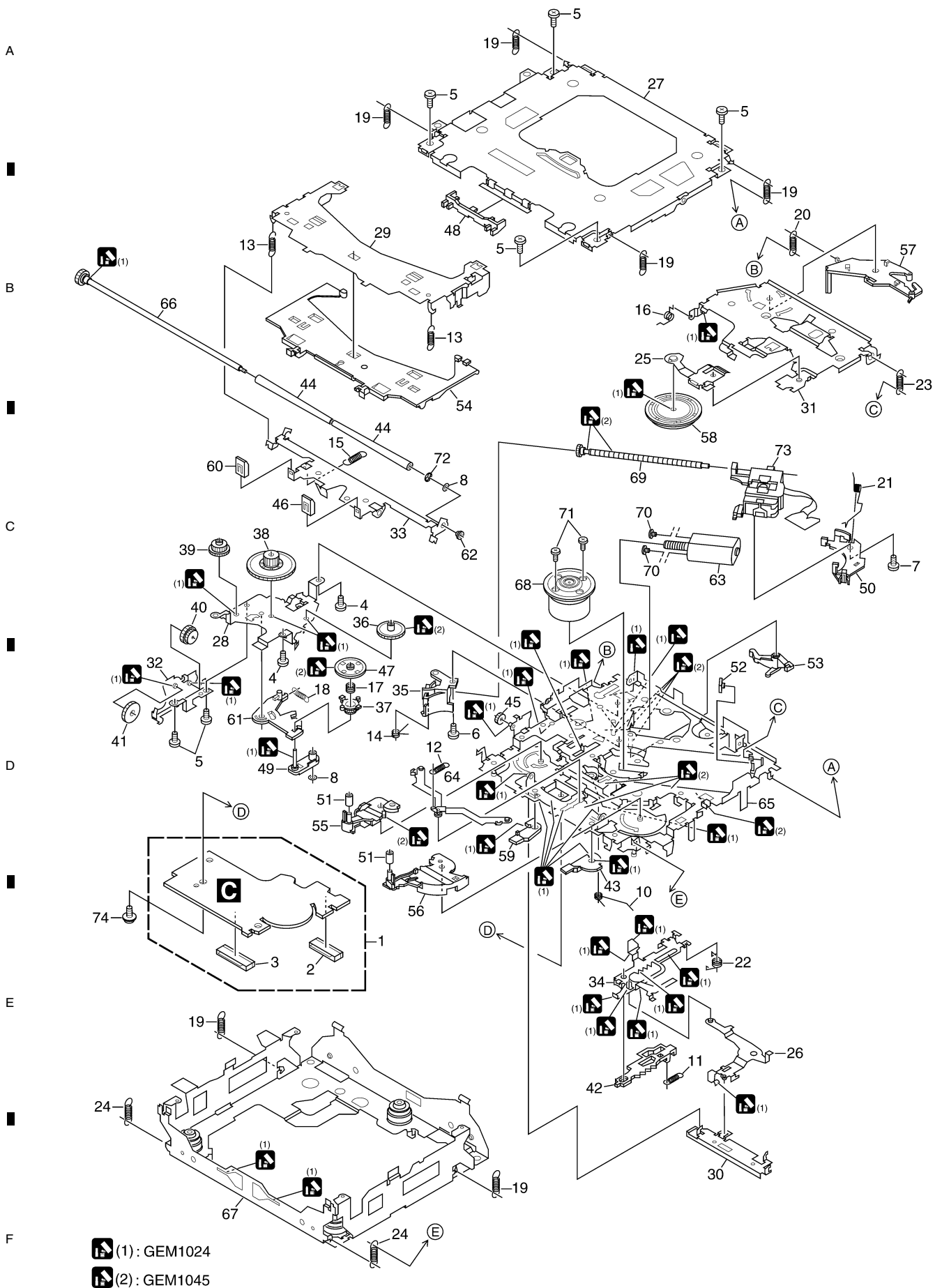


<u>Mark No.</u>	<u>Description</u>	<u>Part No.</u>	<u>Mark No.</u>	<u>Description</u>	<u>Part No.</u>
1	Cord Assy	CDP1015	15	LCD(LCD1801)	See Contrast table(2)
2	Terminal Cover	CKX-003	16	Connector(CN1801)	CKS5663
3	Case	CNB2793	17	Sheet	See Contrast table(2)
4	Holder	CND3598	18	Holder	QNC3004
5	Detachable Assy	See Contrast table(2)	19	Lighting Conductor	QNV3004
6	Screw	BPZ20P100FTC	20	Rubber	QNV3005
7	Spring	CBH2210	21	Connector	QNV3007
8	Button(UP, RIGHT)	QAC3015	22	Jack(CN1802)	YKN5001
9	Button(DOWN, LEFT)	QAC3016	23	Grille Unit	See Contrast table(2)
10	Button(FUNC, BAND/ESC, AUDIO, EQ/LOUD)	QAC3017	24	Knob Unit	See Contrast table(2)
11	Button(1-6)	QAC3019	25	Spring	YBL5010
12	Button(EJECT, DISP/SCRL, TA/AF)	QAC3020	26	Panel	YNS5406
13	Button(DETACH)	QAC3021	27	Sheet	See Contrast table(2)
14	Cover	QNS3022			

(2) CONTRAST TABLE
 DEH-1100MPB/XN/EW5, DEH-1100MP/XN/EW5 and DEH-1120MP/XN/EW5 are constructed the same except for the following:

Mark	No.	Description	DEH-1100MPB/XN/EW5	DEH-1100MP/XN/EW5	DEH-1120MP/XN/EW5
	5	Detachable Assy	QXA3075	QXA3073	QXA3074
	15	LCD(LCD1801)	CAW1932	CAW1927	CAW1927
	17	Sheet	CNN1382	Not used	Not used
	23	Grille Unit	QXA3054	QXA3052	QXA3053
	24	Knob Unit	QXA3064	QXA3072	QXA3064
	27	Sheet	CNN1381	Not used	Not used

9.4 CD MECHANISM MODULE



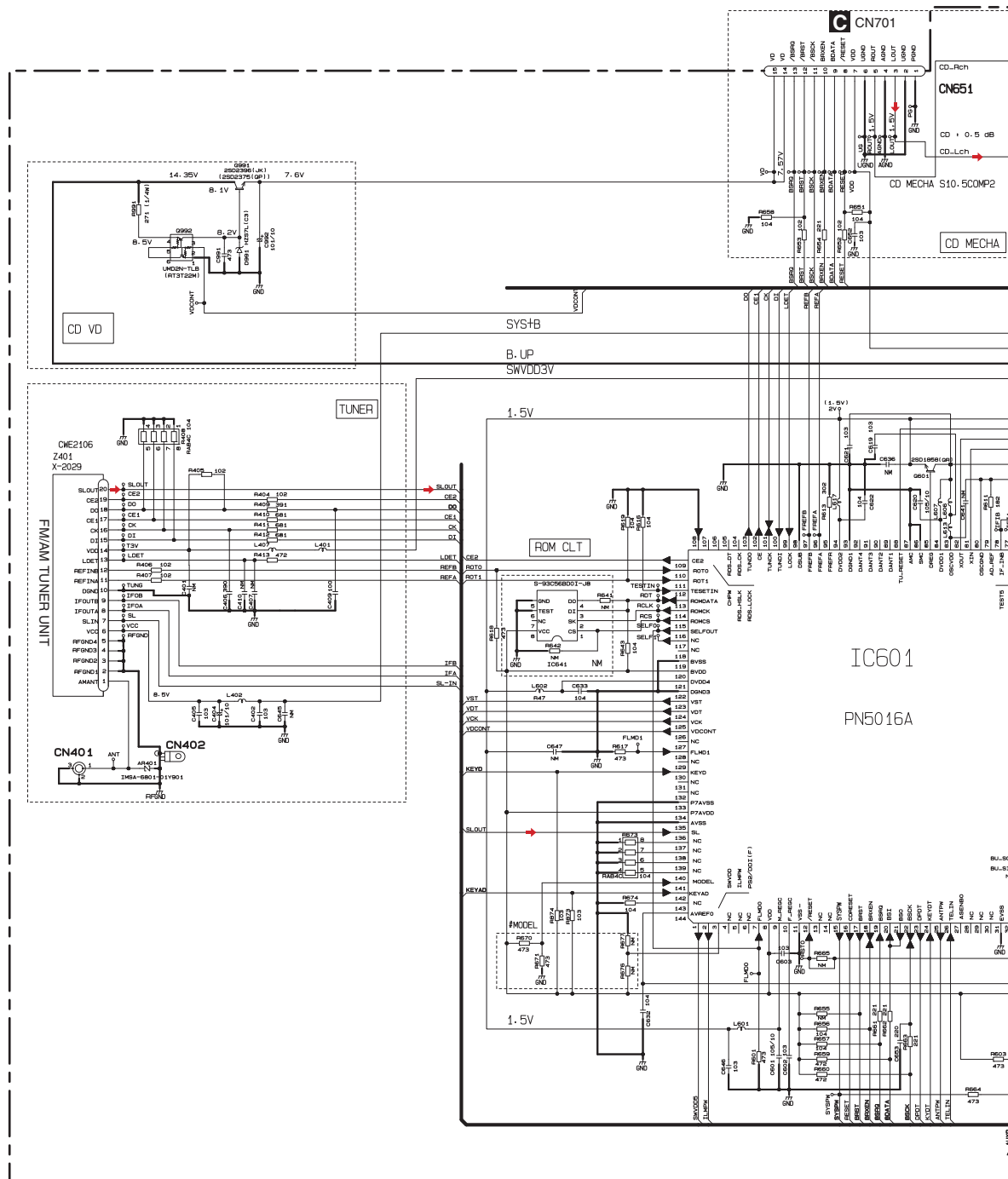
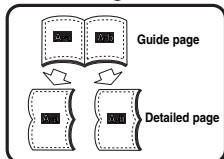
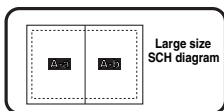
<u>Mark No.</u>	<u>Description</u>	<u>Part No.</u>	<u>Mark No.</u>	<u>Description</u>	<u>Part No.</u>	
1	CD Core Unit(S10.5COMP2)	CWX3514	50	Rack	CNV8342	
2	Connector(CN101)	CKS4911				
3	Connector(CN701)	CKS4808	51	Roller	CNV8343	A
4	Screw	BMZ20P025FTC	52	Holder	CNV8344	
5	Screw	BSZ20P040FTC	53	Arm	CNV8345	
			54	Guide	CNV9498	
6	Screw(M2 x 3)	CBA1511	55	Arm	CNV8348	
7	Screw(M2 x 4)	CBA1835				
8	Washer	CBF1038	56	Arm	CNV8349	
9			57	Arm	CNV8350	
10	Spring	CBH2609	58	Clamper	CNV8365	
			59	Arm	CNV8386	
11	Spring	CBH2612	60	Guide	CNV8396	B
12	Spring	CBH2614				
13	Spring	CBH2616	61	Arm	CNV9521	
14	Spring	CBH2617	62	Collar	CNV8447	
15	Spring	CBH2620	63	Motor Unit(M2)	CXC4026	
			64	Arm Unit	CXC4027	
16	Spring	CBH2855	65	Chassis Unit	CXC4028	
17	Spring	CBH2937				
18	Spring	CBH2735	66	Gear Unit	CXC4029	
19	Spring	CBH2854	67	Frame Unit	CXC4031	
20	Spring	CBH2642	68	Motor Unit(M1)	CXC7134	
			69	Screw Unit	CXC6359	C
21	Spring	CBH2856	70	Screw	JFZ20P025FTC	
22	Spring	CBH2857				
23	Spring	CBH2860	71	Screw	JGZ17P022FTC	
24	Spring	CBH2861	72	Washer	YE20FTC	
25	Spring	CBL1686	73	Pickup Unit(P10.5)(Service)	CXX1942	
			74	Screw	IMS26P030FTC	
26	Arm	CND1909				
27	Frame	CND2582				
28	Bracket	CND2583				
29	Arm	CND3831				
30	Lever	CND2585				D
31	Arm	CND2586				
32	Bracket	CND2587				
33	Arm	CND2588				
34	Lever	CND2589				
35	Holder	CNV9522				
36	Gear	CNV7207				
37	Gear	CNV9513				
38	Gear	CNV7209				E
39	Gear	CNV9514				
40	Gear	CNV9515				
41	Gear	CNV9516				
42	Rack	CNV9517				
43	Arm	CNV7216				
44	Roller	CNV8189				
45	Gear	CNV9518				
46	Guide	CNV9519				
47	Gear	CNV7595				F
48	Guide	CNV9520				
49	Arm	CNV7805				

10. SCHEMATIC DIAGRAM

10.1 TUNER AMP UNIT(GUIDE PAGE)

Note: When ordering service parts, be sure to refer to "EXPLODED VIEWS AND PARTS LIST" or "ELECTRICAL PARTS LIST".

A-a



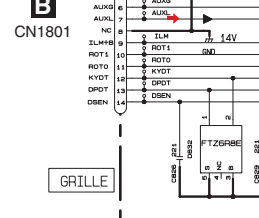
For resistors and capacitors in the circuit diagrams, their resistance values or capacitance values are expressed in codes.

Ex. *Resistors
Code Practical value
123 12k ohms
103 10k ohms
*Capacitors
Code Practical value
103 0.01uF
101/10 100uF/10V

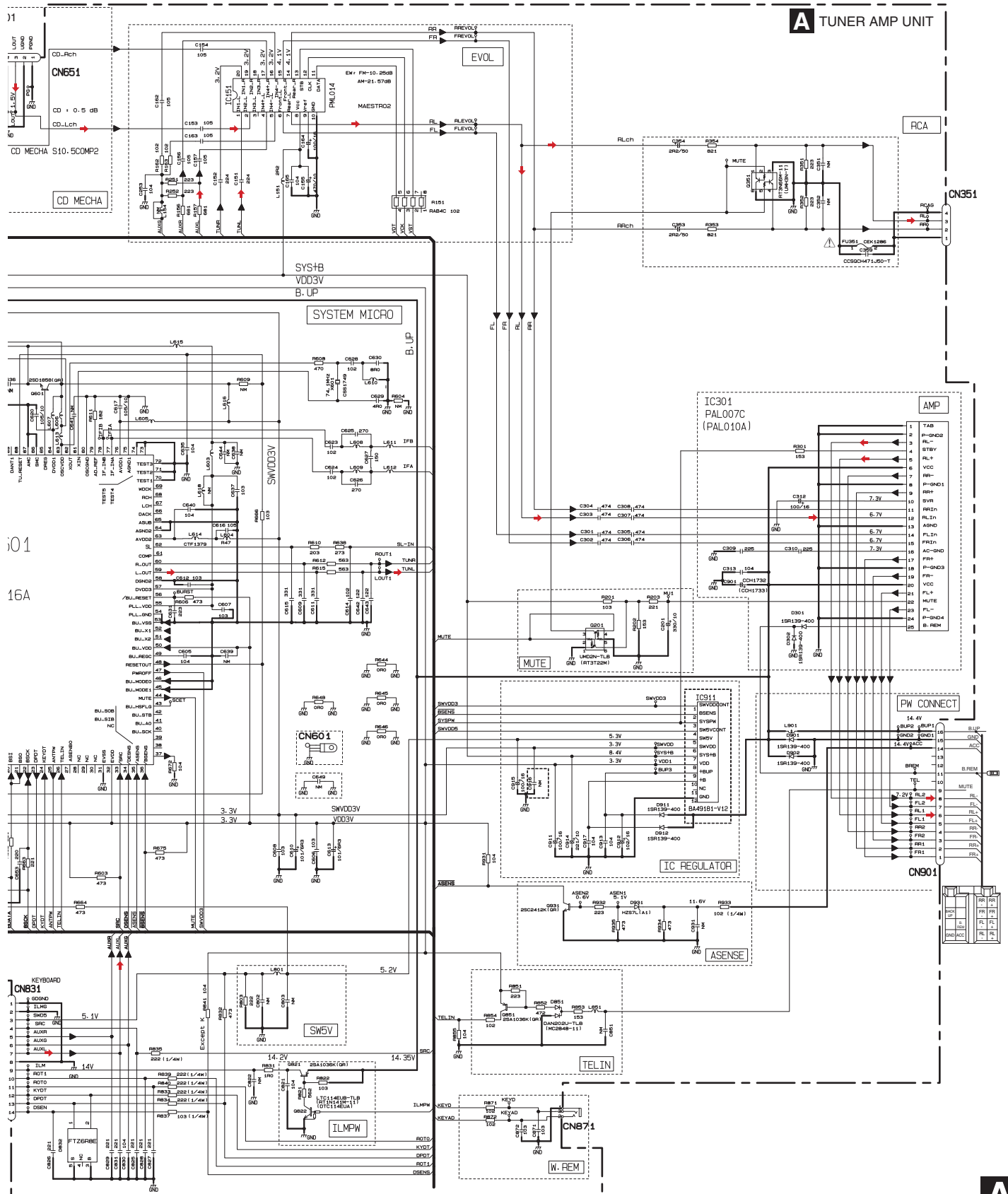
The Δ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.

EVOL	151 - 200	SWVD05	801 - 820	CD VD	991 - 999
MUTE	201 - 250	ILMPW	821 - 830		
AUX IN	251 - 260	GRILLE	831 - 850		
AMP	301 - 350	TELMUTE	851 - 870		
RCA	351 - 400	M-REM	871 - 880		
TUNER	401 - 600	B-UP	901 - 910		
UCOM	601 - 640	POWER	911 - 930		
ROM CLT	641 - 650	ASENSE	931 - 940		
CD MECHA	651 - 700	A-ANT B-REM	951 - 960		

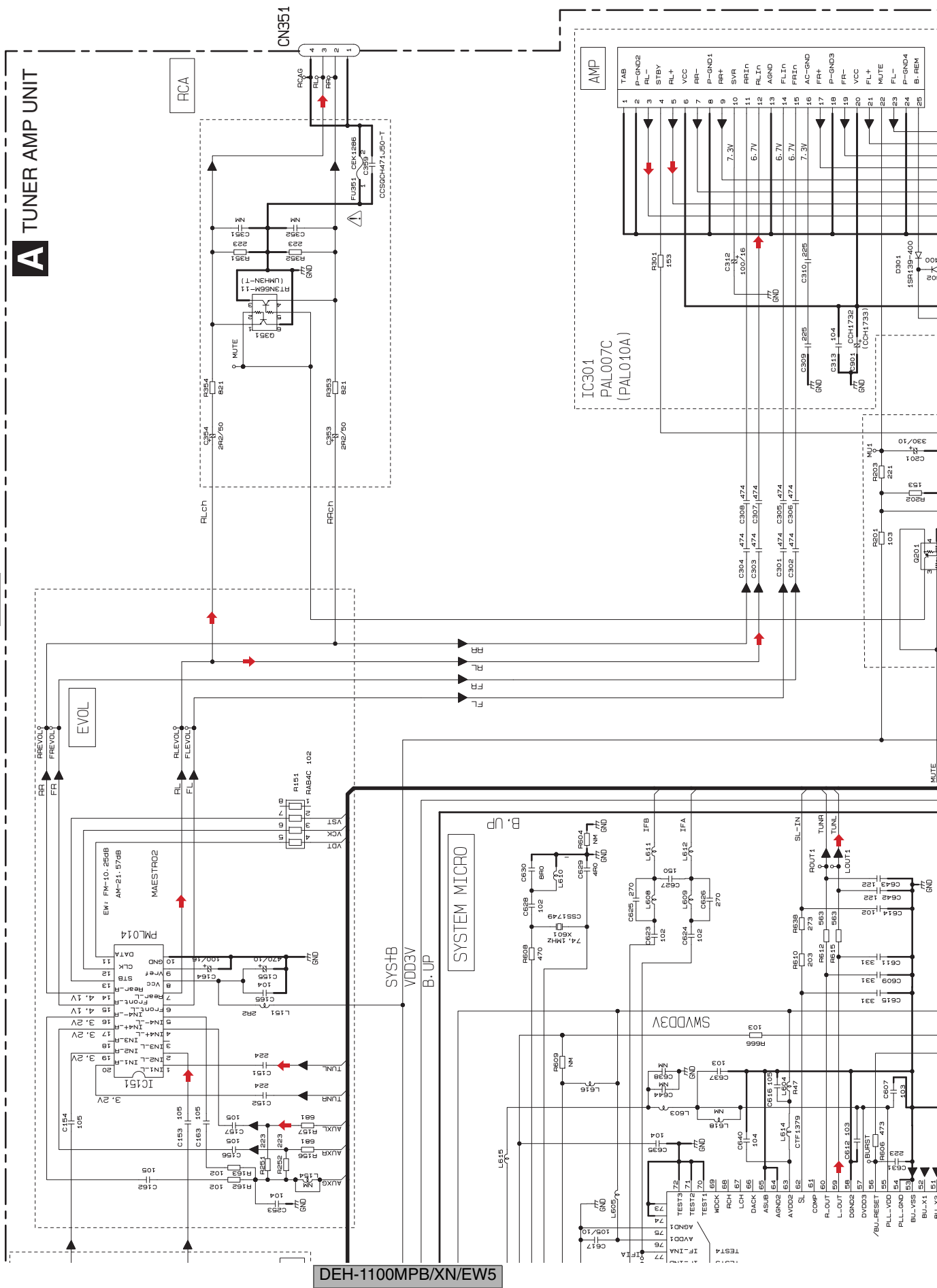
B



A-b

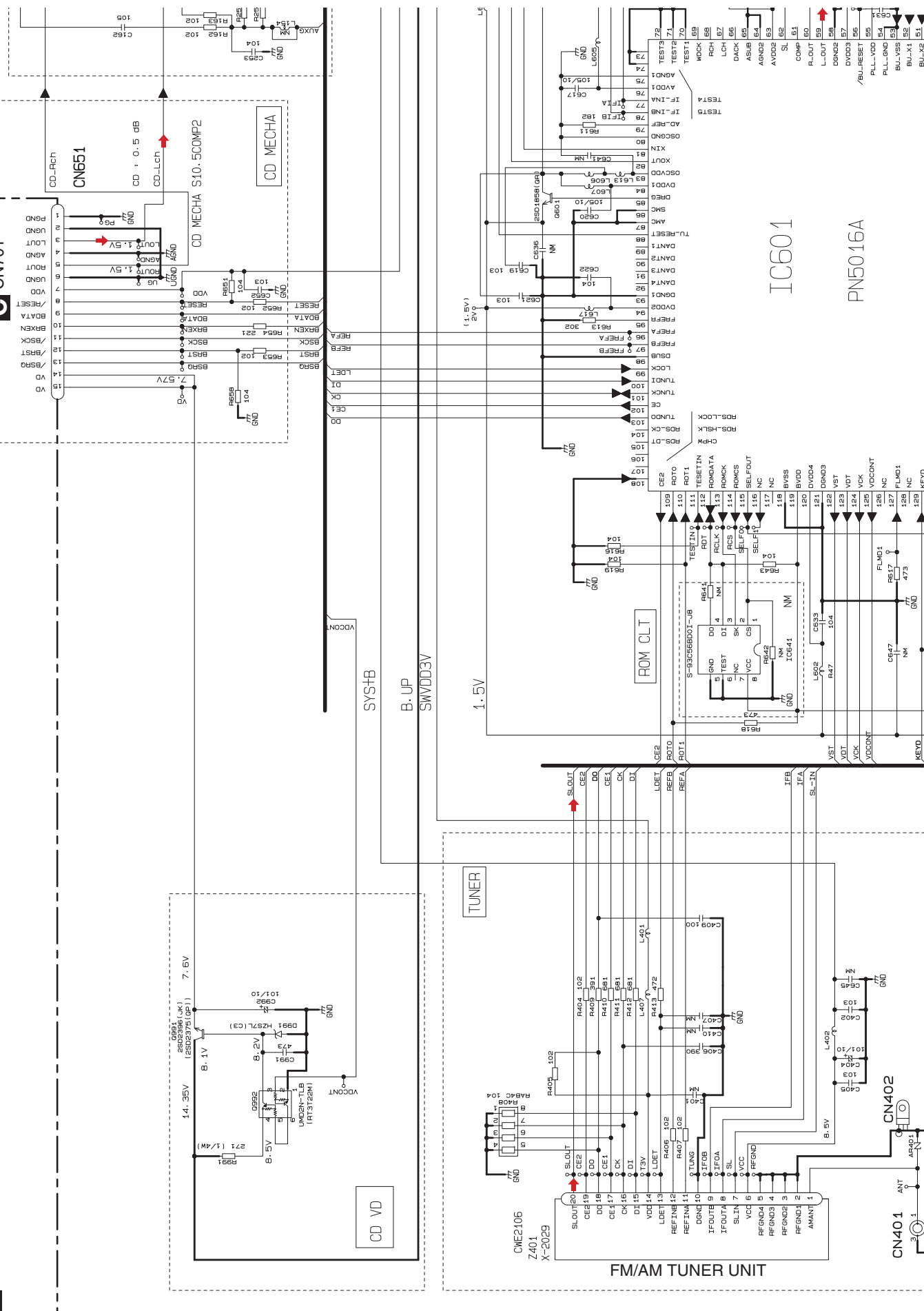


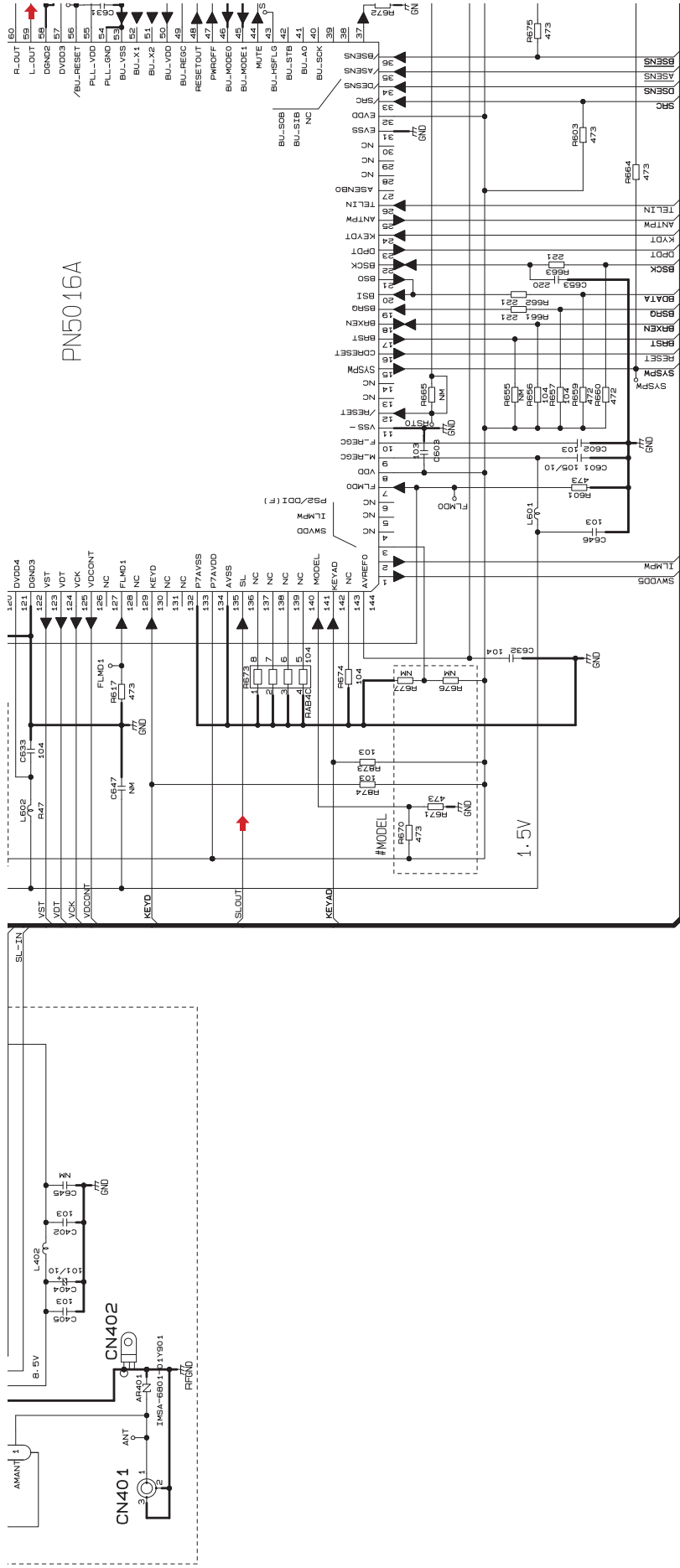
A-a	A-b
-----	-----

A-b



A-a





For resistors and capacitors in the circuit diagrams, their resistance values or capacitance values are expressed in codes:

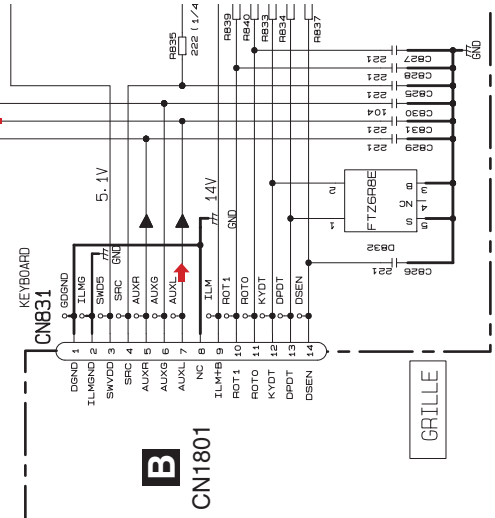
Ex. *Resistors
Code
123
103

Practical value
12k ohms
10k ohms

*Capacitors
Code
103
101/10

Practical value
0.01uF
100uF/10V

The Δ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.



B CN1801

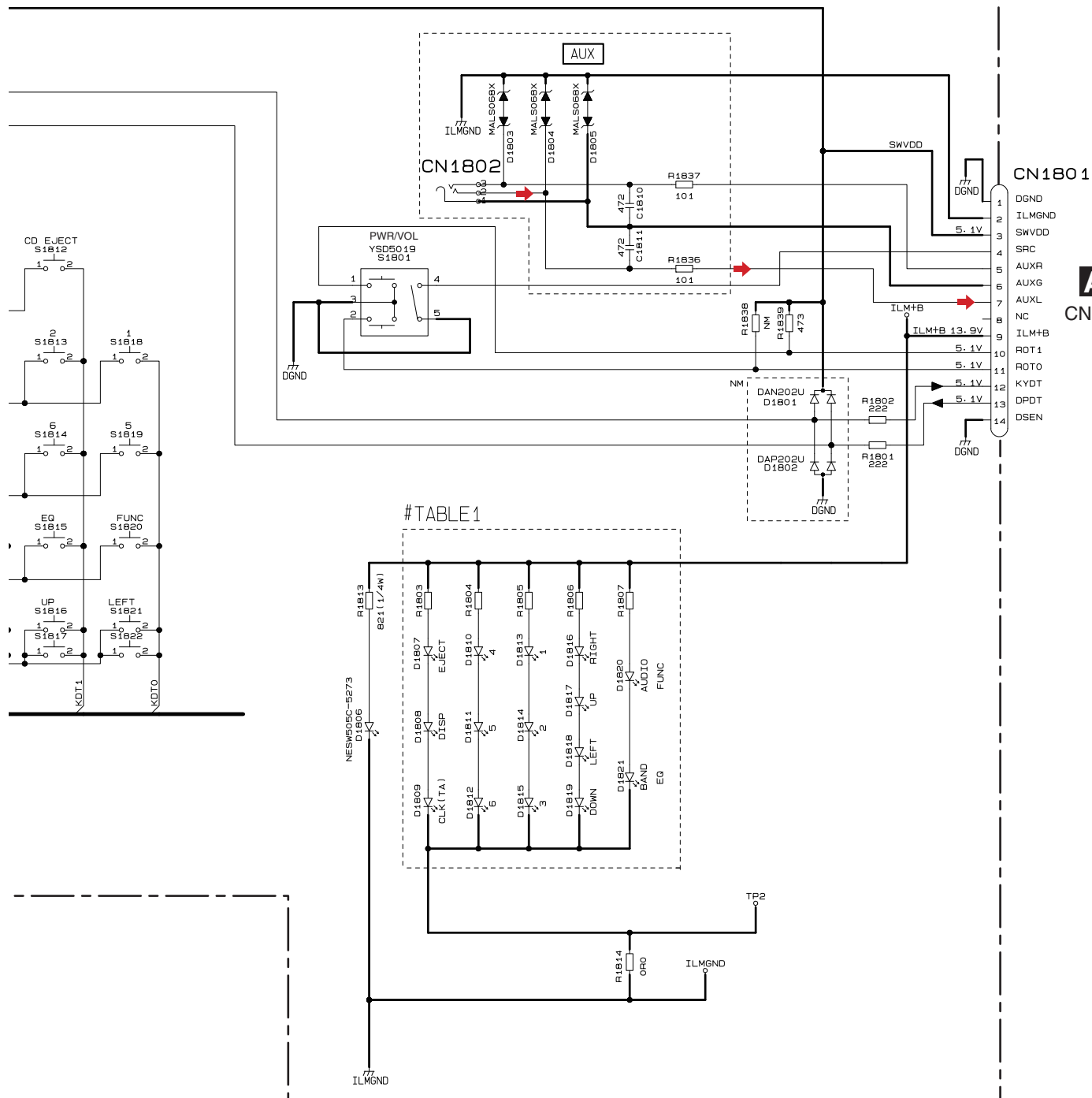
EVOL	151 - 200	SWDD5	801 - 820	CD	VD	991 - 999
MUTE	201 - 250	TLMPW	821 - 830			
AUX IN	251 - 260	GRILLE	831 - 850			
AMP	301 - 350	TELMUTE	851 - 870			
RCA	351 - 400	W. REM	871 - 880			
TUNER	401 - 400	B. UP	901 - 910			
UCOM	601 - 640	POWER	911 - 930			
ROM CLT	641 - 650	ASENSE	931 - 940			
CD MECHA	651 - 700	A. ANT B. REM	951 - 960			

A-a A-b

A-b

B

B KEYBOARD UNIT



model	LED COLOR	R1803-R1805	R1806	R1807	D1807-D1821
A : DEH-1120MP/XN/EW5	PUER GREEN	561(1/4W)	391(1/4W)	751(1/4W)	CL-195PG-CD
B : DEH-1100MP/XN/EW5	SUPER RED	821(1/4W)	391(1/4W)	122(1/4W)	CL-195SR-CD
C : DEH-1100MPB/XN/EW5	SUPER RED	821(1/4W)	391(1/4W)	122(1/4W)	CL-195SR-CD

4

A



C

D

E

F

C

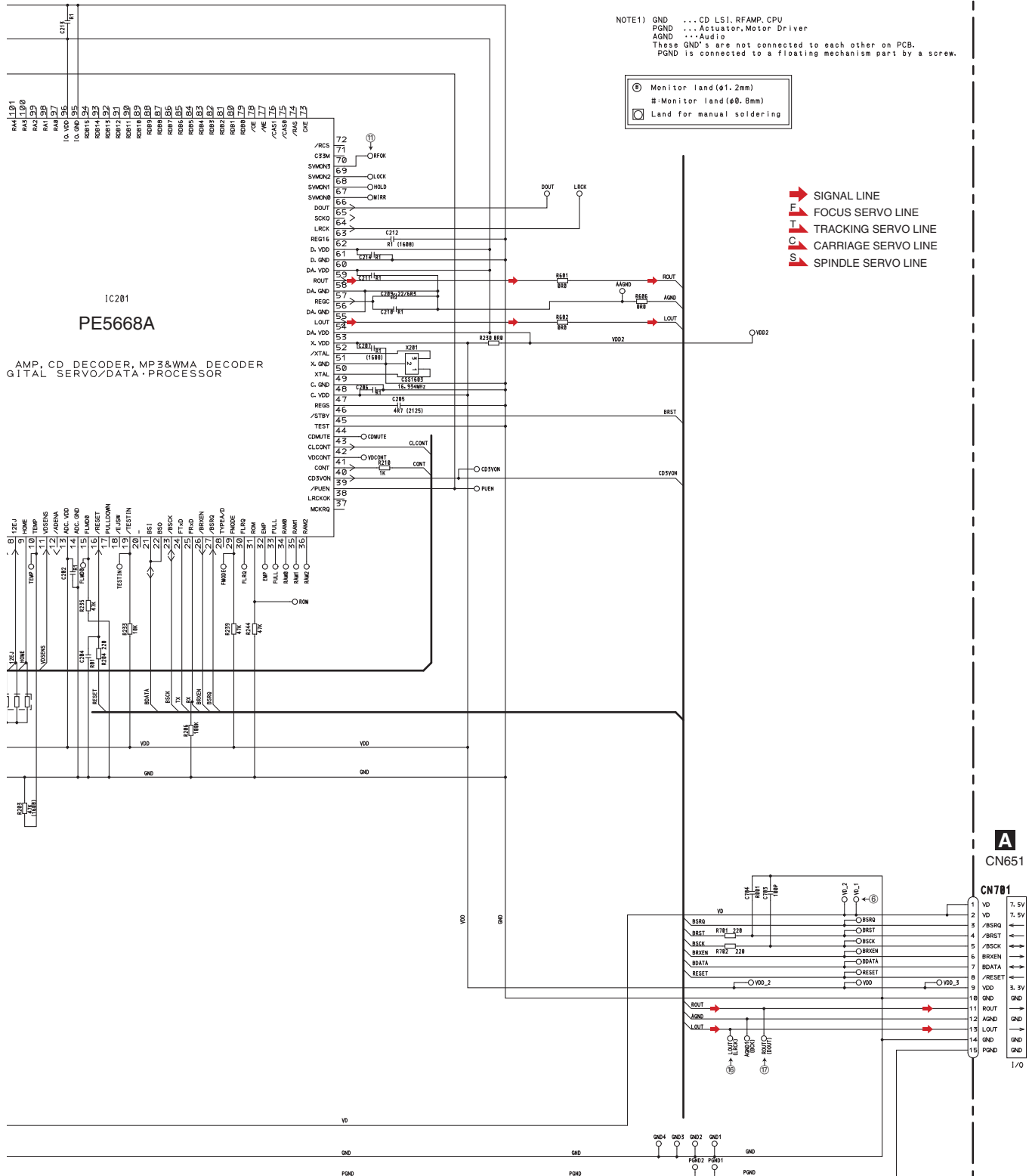
C-b

C CD CORE UNIT(S10.5COMP2)

NOTE1) GND ... CD LSI, RFAMP, CPU
 PGND ... Actuator, Motor Driver
 AGND ... Audio
 These GND's are not connected to each other on PCB.
 PGND is connected to a floating mechanism part by a screw.

- ① Monitor land(φ1.2mm)
 # Monitor land(φ0.8mm)
 Land for manual soldering

- SIGNAL LINE
 F FOCUS SERVO LINE
 T TRACKING SERVO LINE
 C CARRIAGE SERVO LINE
 S SPINDLE SERVO LINE



C-a C-b

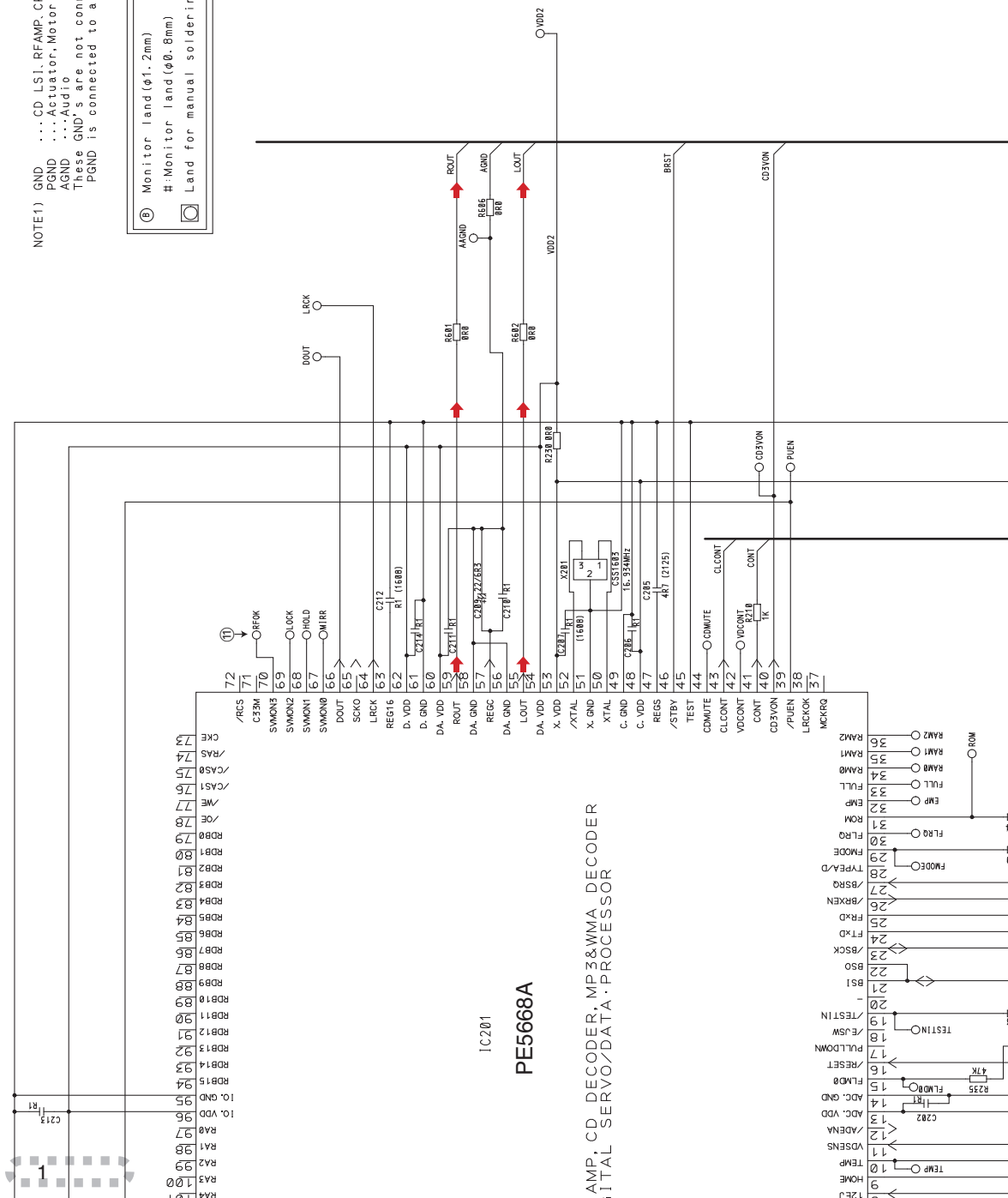
C-b

CD CORE UNIT(S10.5COMP2)

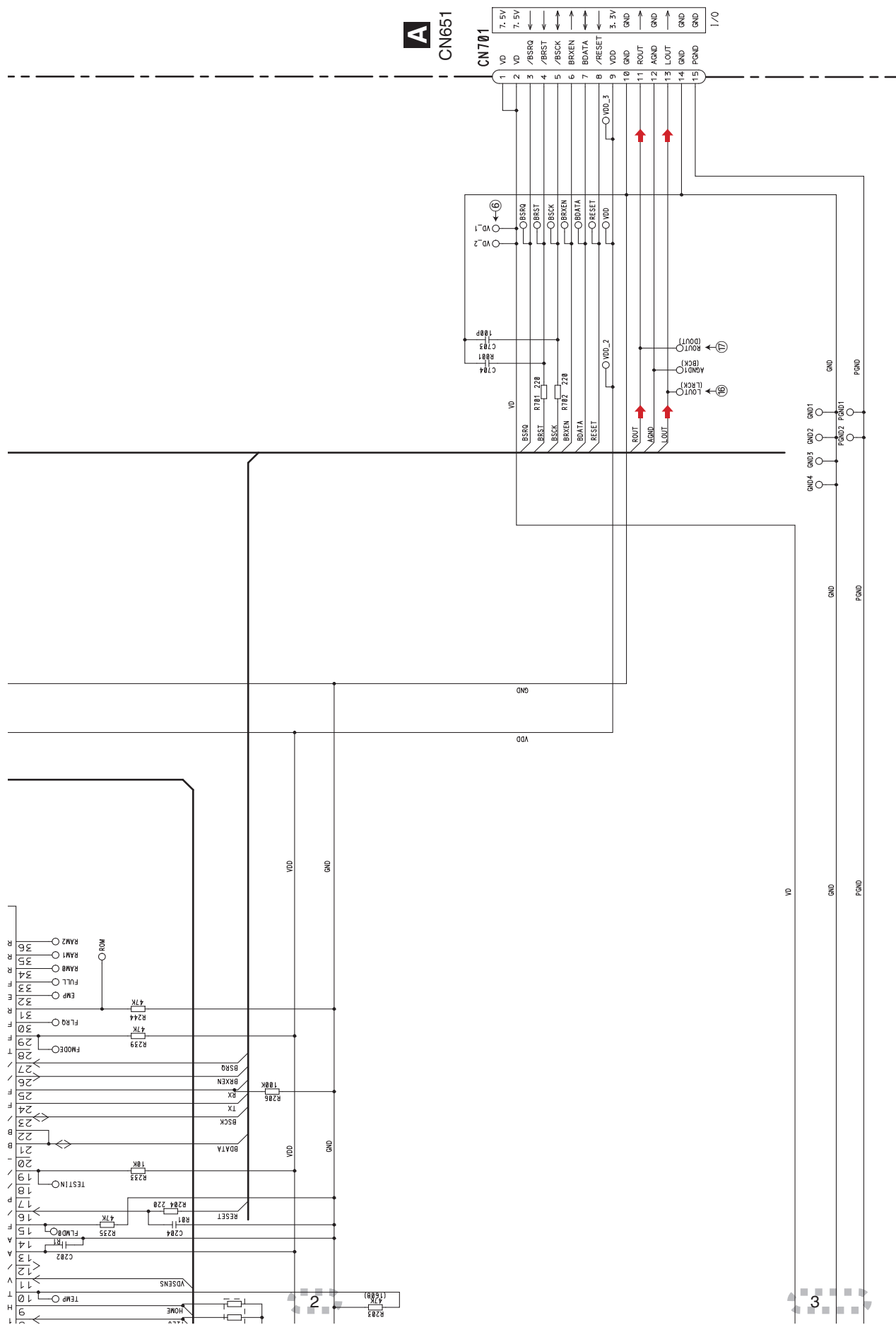
NOTE1) GND ...CD LSI, RFAMP, CPU
PGND ...Actuator, Motor Driver
AGND ...Audio
These GND's are not connected to each other on PCB.
PGND is connected to a floating mechanism part by a screw.

- ⑤ Monitor land (φ1.2mm)
- #: Monitor land (φ0.8mm)
- Land for manual soldering

SIGNAL LINE
↑ FOCUS SERVO LINE
↑ TRACKING SERVO LINE
↑ CARRIAGE SERVO LINE
↑ SPINDLE SERVO LINE



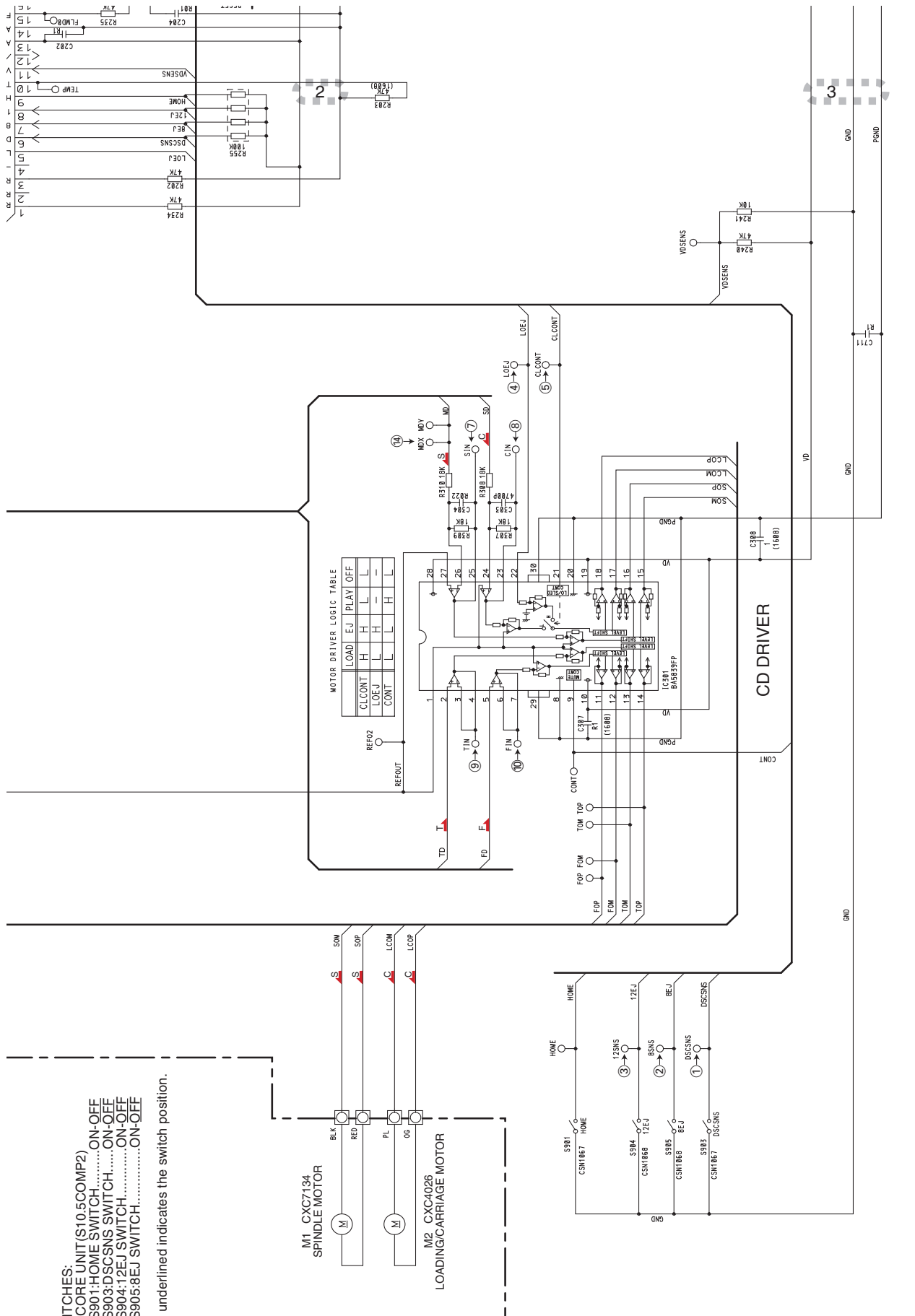
DEH-1100MPB/XN/EW5



SWITCHES:

CD CORE UNIT (S10.5COMP2)	
S901:HOME SWITCH.....	ON-OFF
S903:DSCSNS SWITCH.....	ON-OFF
S904:12EJ SWITCH.....	ON-OFF
S905:8EJ SWITCH.....	ON-OFF

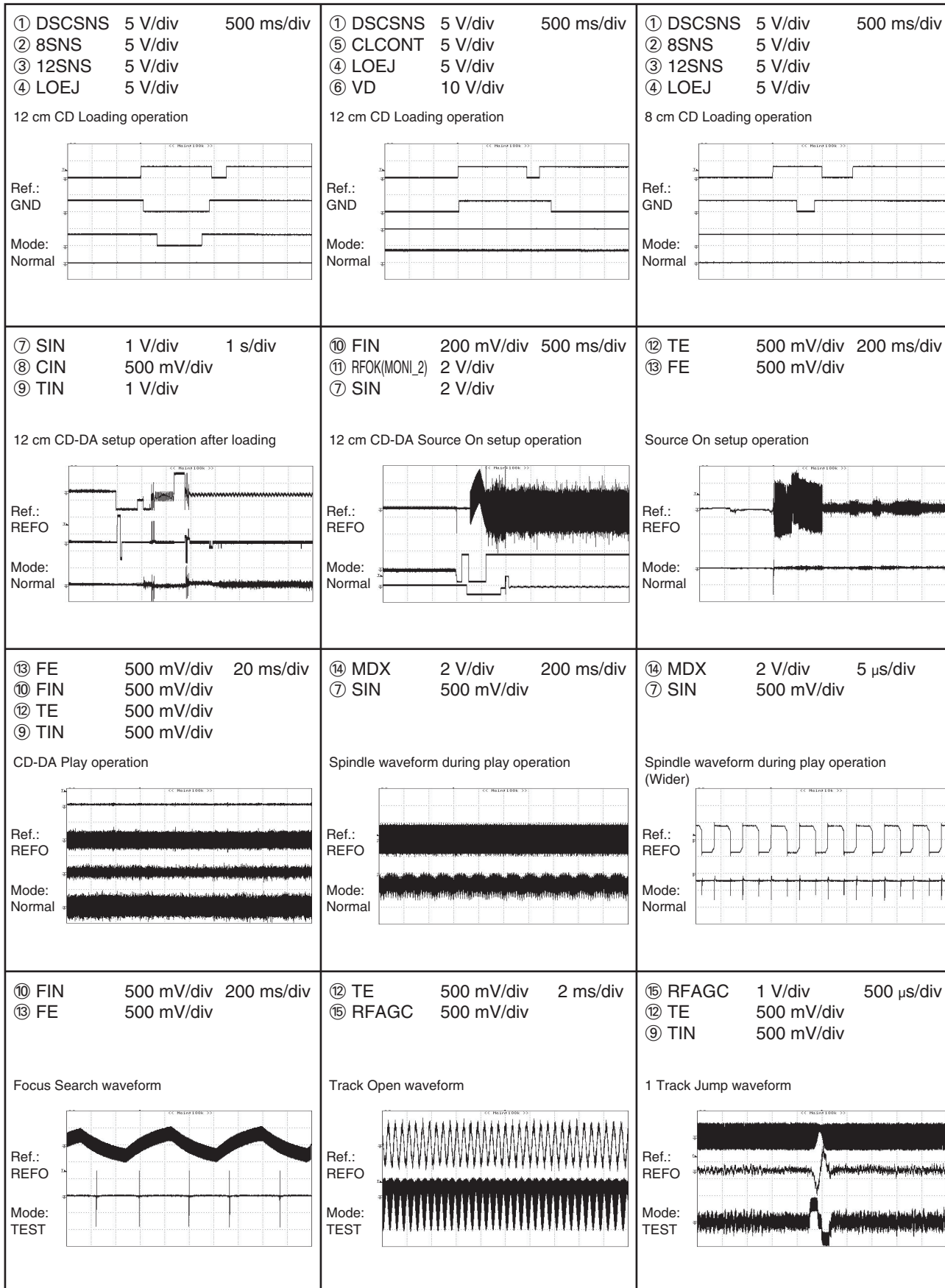
The underlined indicates the switch position.

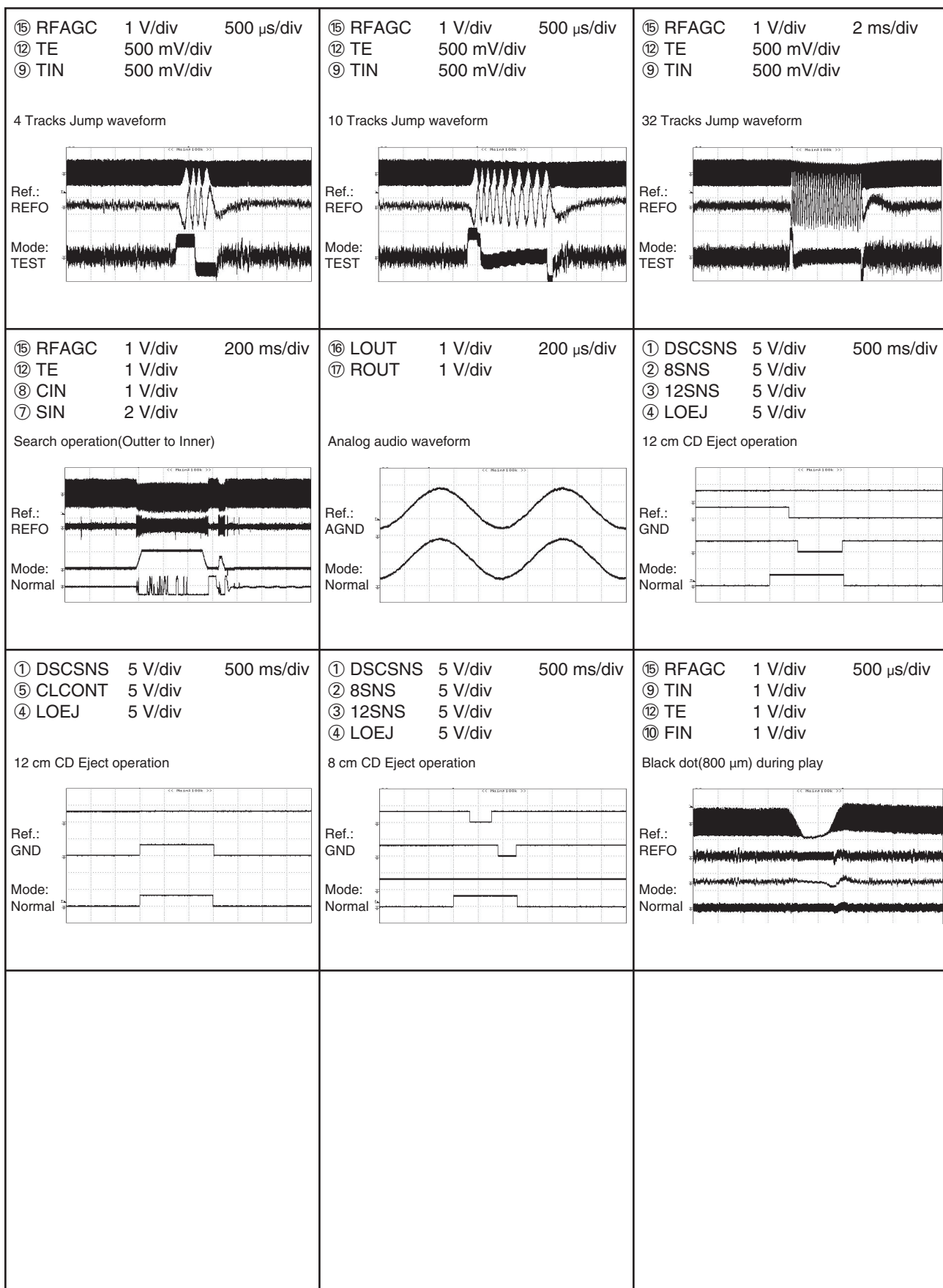


10.4 WAVEFORMS

CD CORE UNIT

Note : 1. The encircled numbers denote measuring points in the circuit diagram.
2. Reference voltage REFO1(1.65 V)





11. PCB CONNECTION DIAGRAM

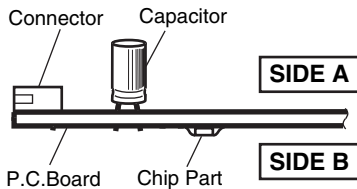
11.1 TUNER AMP UNIT

NOTE FOR PCB DIAGRAMS

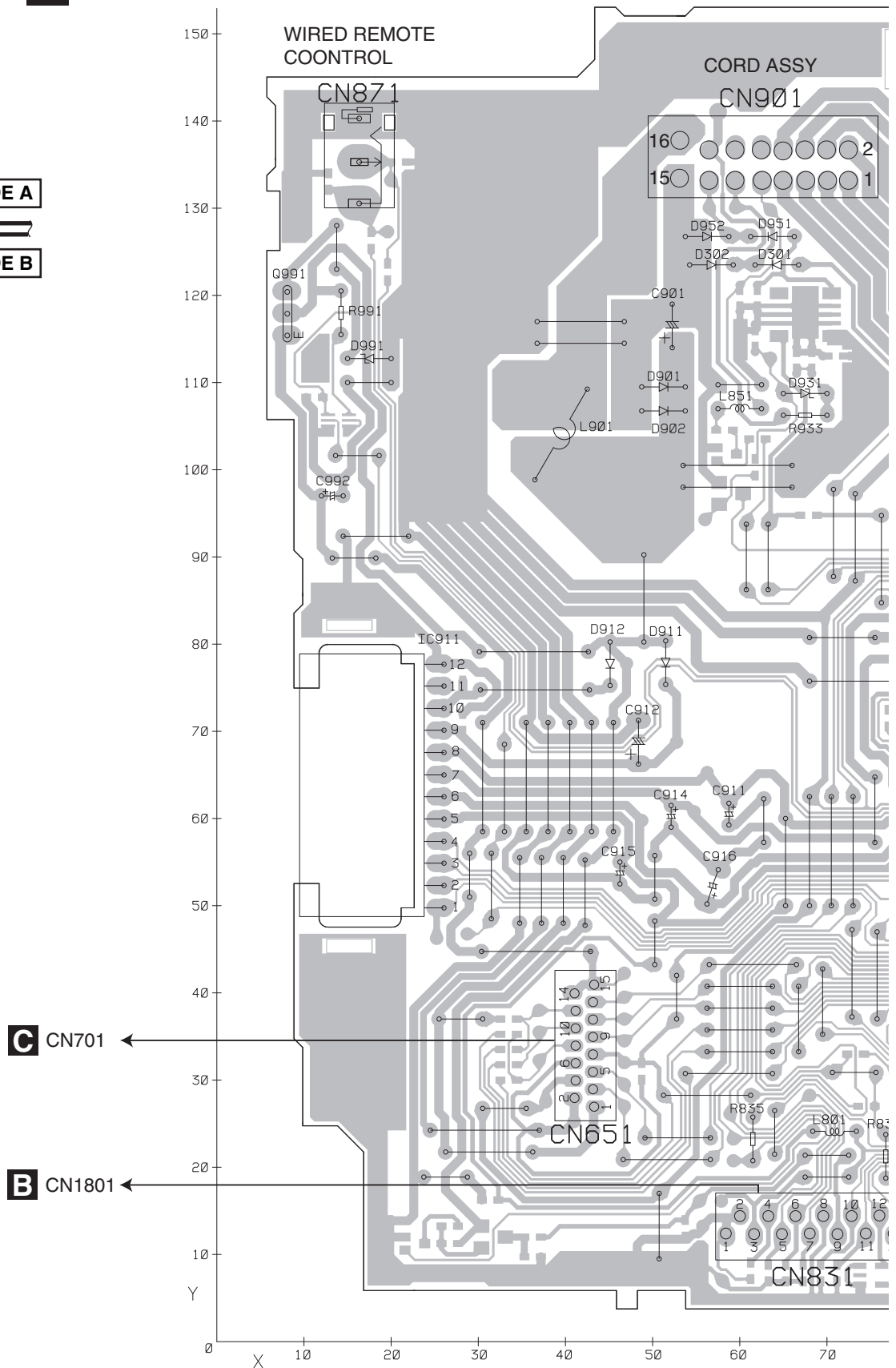
1. The parts mounted on this PCB include all necessary parts for several destination.

For further information for respective destinations, be sure to check with the schematic diagram.

2. Viewpoint of PCB diagrams

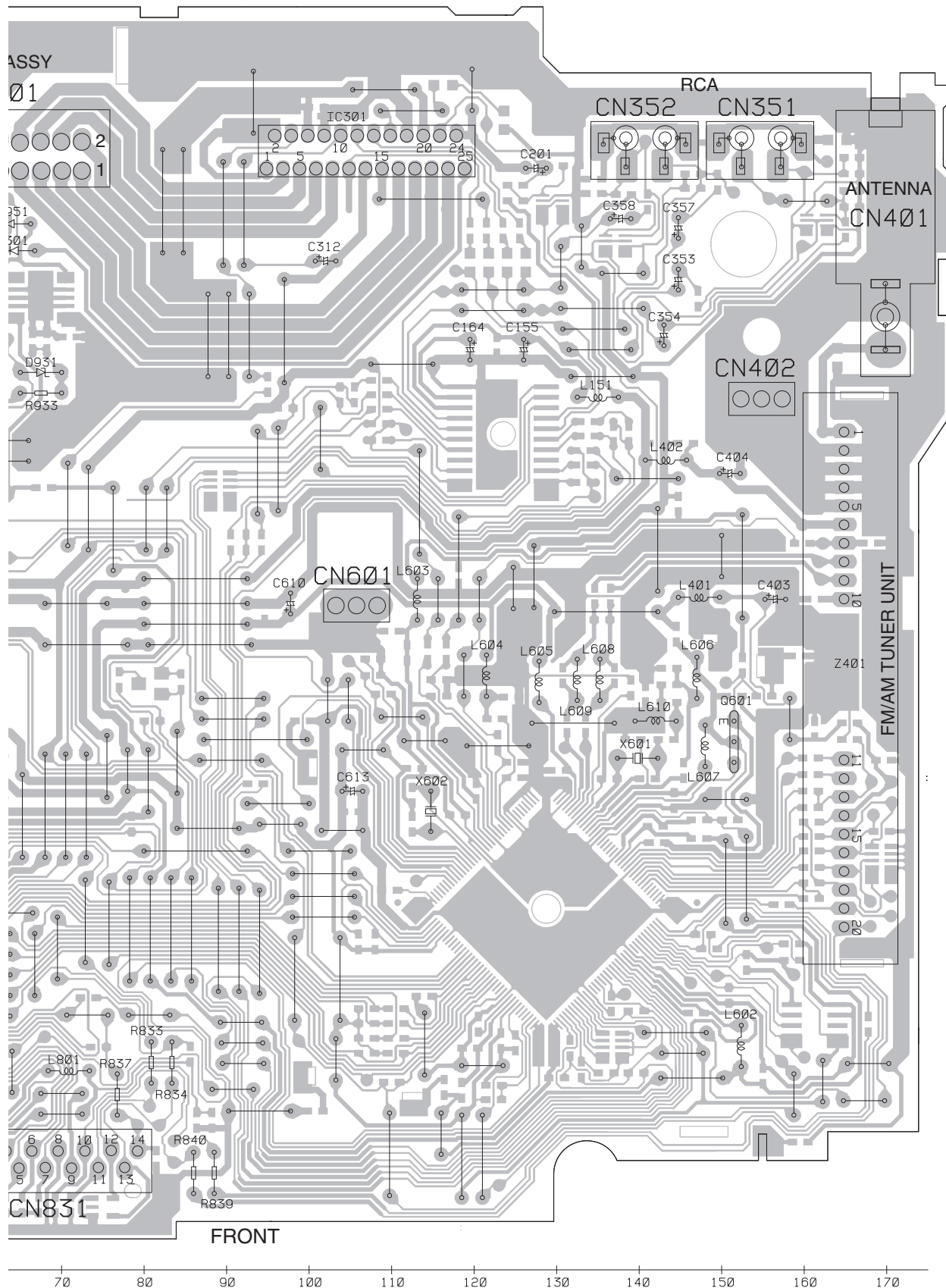


A TUNER AMP UNIT



A

SIDE A



A

A TUNER AMP UNIT

B

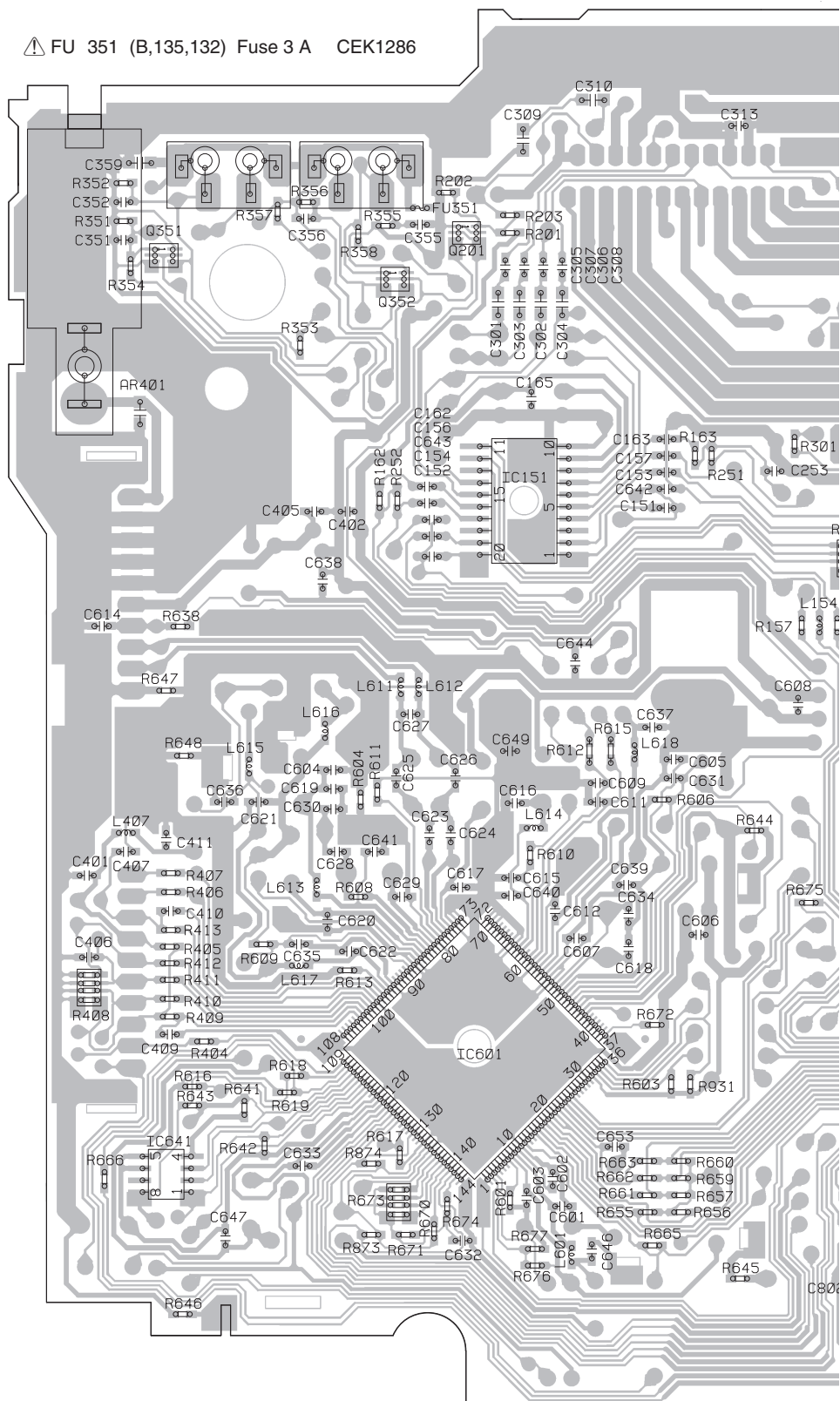
C

D

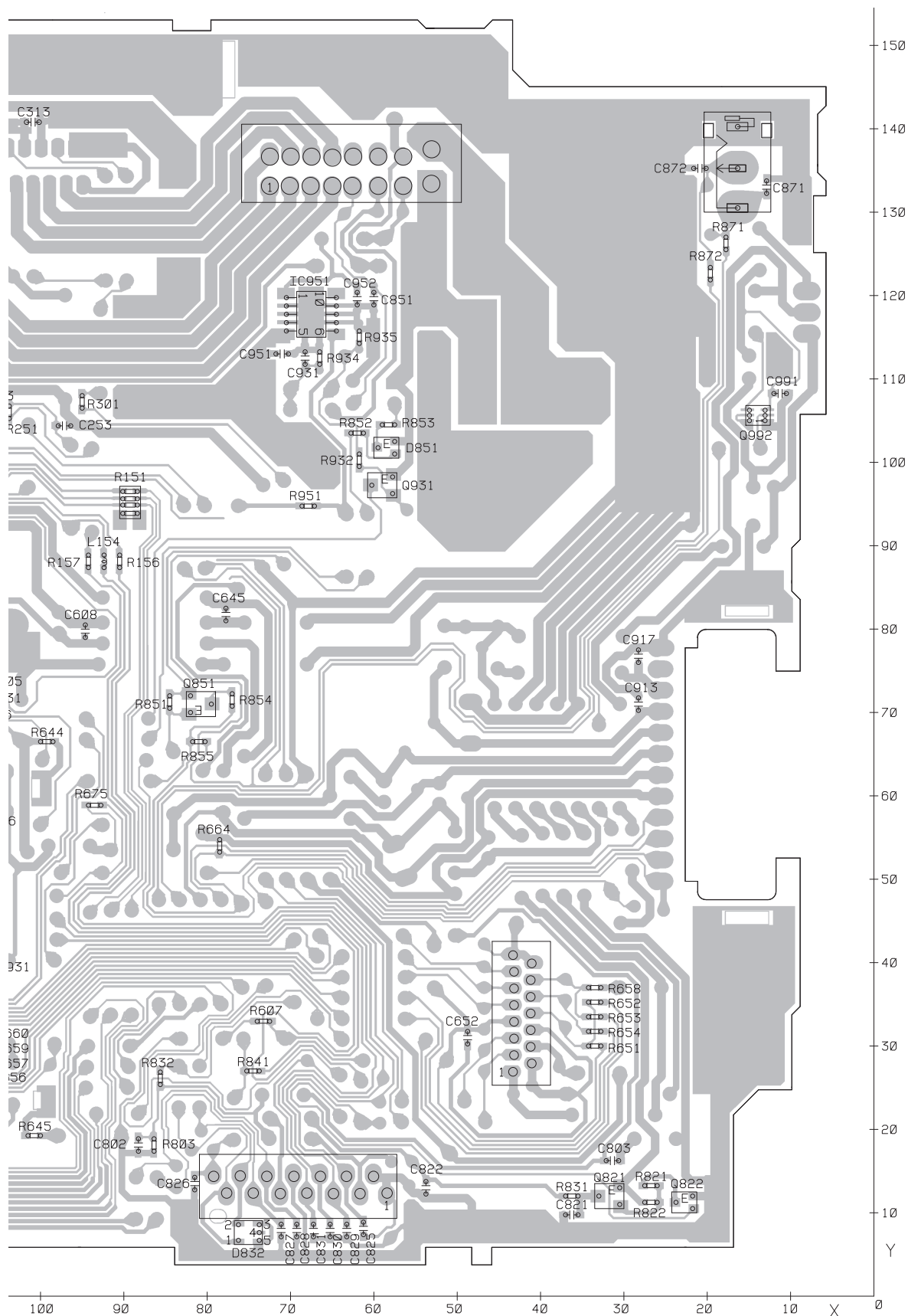
E

F

⚠ FU 351 (B,135,132) Fuse 3 A CEK1286



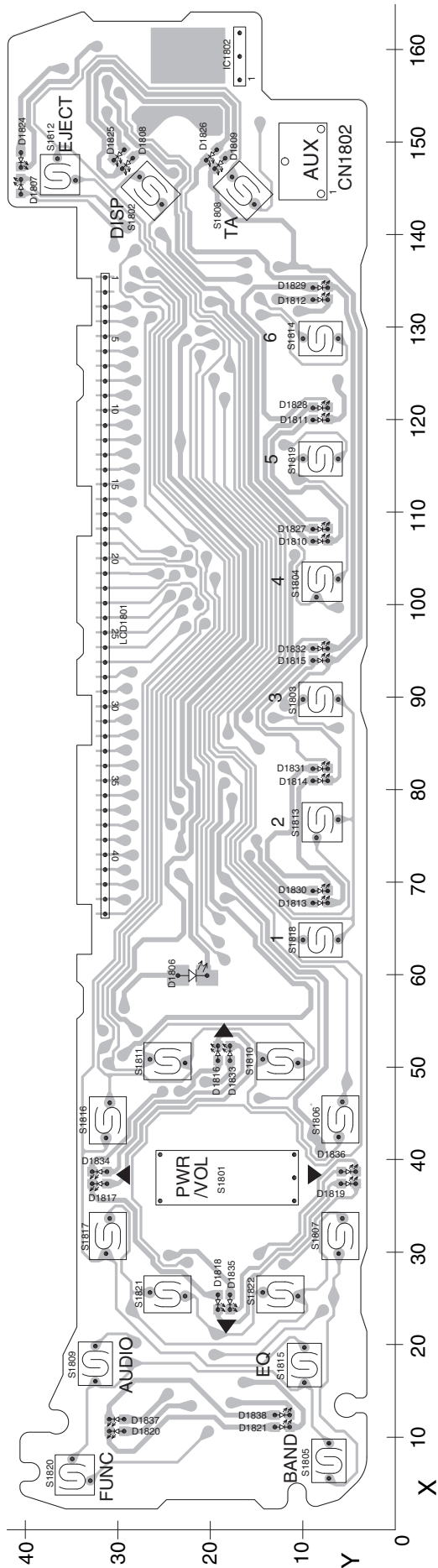
SIDE B



11.2 KEYBOARD UNIT

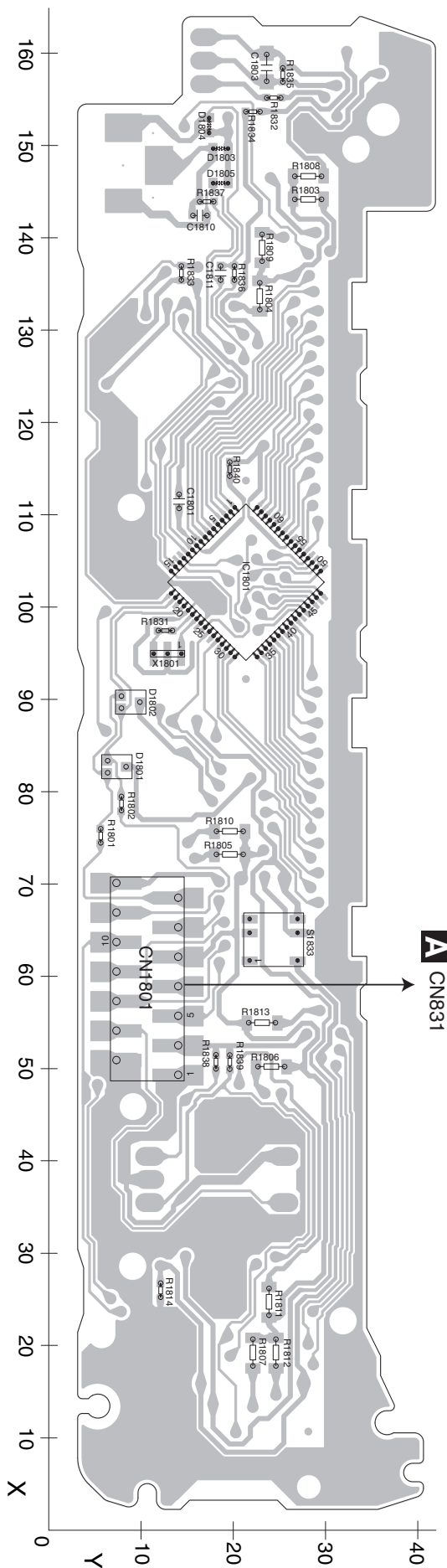
B KEYBOARD UNIT

SIDE A



B KEYBOARD UNIT

SIDE B



DEH-1100MPB/XN/EW5

B

A

B

C

D

E

F

11.3 CD CORE UNIT(S10.5COMP2)

C CD CORE UNIT(S10.5COMP2)

SIDE A

A CN651

PICKUP UNIT(P10.5)(SERVICE)

CN701

CN101

CN702
1 2 3 4 5 6

M2
LOADING
/CARRIAGE
MOTOR

M1
SPINDLE
MOTOR

12. ELECTRICAL PARTS LIST

NOTE:

- Parts whose parts numbers are omitted are subject to being not supplied.
- The part numbers shown below indicate chip components.

Chip Resistor

RS1/○○○○○J,RS1/○○○○○J

Chip Capacitor (except for CQS.....)

CKS....., CCS....., CSZS.....

- The Δ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
- Meaning of the figures and others in the parentheses in the parts list.

Example) IC 301 is on the point (face A, 91 of x-axis, and 111 of y-axis) of the corresponding PC board.

IC 301 (A, 91, 111) IC NJM2068V

- The expression of the unit in this manual is shown by u instead of μ . Please do not make a mistake.

	<u>Circuit Symbol and No.</u>	<u>Part No.</u>	<u>Circuit Symbol and No.</u>	<u>Part No.</u>
Unit Number: QWM3032	D 902	(A,49,107) Diode	1SR139-400	
Unit Name : Tuner Amp Unit	D 911	(A,52,80) Diode	1SR139-400	
Unit Number: (1120MP)	D 912	(A,45,80) Diode	1SR139-400	
Unit Name : Keyboard Unit	D 931	(A,65,109) Diode	HZS7L(A1)	
Unit Number: (1100MP)	D 991	(A,20,113) Diode	HZS7L(C3)	
Unit Number: (1100MPB)	L 151	(A,138,106) Inductor	LAU2R2K	
Unit Name : Keyboard Unit	L 401	(A,150,82) Inductor	LAU2R2K	
Unit Number: CWX3514	L 402	(A,146,98) Inductor	LAU2R2K	
Unit Name : CD Core Unit(S10.5COMP2)	L 407	(B,166,66) Inductor	CTF1473	
	L 601	(B,119,22) Inductor	CTF1389	
	L 602	(A,152,25) Inductor	LAUR47K	
	L 603	(A,113,79) Inductor	LAU2R2K	
	L 604	(A,122,70) Inductor	LAUR47K	
	L 605	(A,128,69) Inductor	LAUR47K	
	L 606	(A,147,69) Inductor	LAU1R0K	
	L 607	(A,148,61) Inductor	LAU1R0K	
	L 608	(A,135,69) Inductor	LAU1R5K	
	L 609	(A,133,69) Inductor	LAU1R5K	
	L 610	(A,140,67) Inductor	LAU1R2J	
	L 611	(B,137,82) Inductor	CTF1379	
	L 612	(B,135,82) Inductor	CTF1379	
	L 613	(B,145,61) Inductor	CTF1379	
	L 614	(B,123,67) Inductor	CTF1379	
	L 615	(B,153,73) Inductor	CTF1379	
	L 616	(B,145,77) Inductor	CTF1379	
	L 617	(B,147,52) Inductor	CTF1389	
	L 801	(A,73,24) Inductor	LAU2R2K	
	L 851	(A,58,107) Inductor	LAU2R2K	
	L 901	(A,36,98) Choke Coil 600 uH	CTH1280	
	X 601	(A,142,62) Oscillator 74.100 MHz	CSS1749	
	Δ FU351	(B,135,132) Fuse 3 A	CEK1286	
	AR401	(B,164,111) Surge Protector	IMSA-6801-01Y901	
RESISTORS				
	R 151	(B,89,95)	RAB4C102J	
	R 156	(B,91,88)	RS1/16S681J	
	R 157	(B,94,88)	RS1/16S681J	
	R 162	(B,139,101)	RS1/16S102J	
	R 163	(B,106,106)	RS1/16S102J	

5		6		7		8	
<u>Circuit Symbol and No.</u>		<u>Part No.</u>		<u>Circuit Symbol and No.</u>		<u>Part No.</u>	
R 201	(B,125,130)	RS1/16S103J		R 822	(B,27,11)	RS1/16S103J	
R 202	(B,132,134)	RS1/16S153J		R 831	(B,36,12)	RS1/16S1R0J	
R 203	(B,125,131)	RS1/16S221J		R 832	(B,86,26)	RS1/16S473J	
R 251	(B,104,106)	RS1/16S223J		R 833	(A,81,23)	RD1/4PU222J	A
R 252	(B,137,101)	RS1/16S223J		R 834	(A,83,23)	RD1/4PU222J	
R 301	(B,95,107)	RS1/16S153J		R 835	(A,62,21)	RD1/4PU222J	
R 351	(B,166,131)	RS1/16S223J		R 837	(A,77,19)	RD1/4PU103J	
R 352	(B,166,135)	RS1/16S223J		R 839	(A,89,14)	RD1/4PU222J	
R 353	(B,147,118)	RS1/16S821J		R 840	(A,86,14)	RD1/4PU222J	
R 354	(B,165,126)	RS1/16S821J		R 841	(B,75,27)	RS1/16S104J	
R 404	(B,157,44)	RS1/16S102J		R 851	(B,85,71)	RS1/16S223J	
R 405	(B,161,54)	RS1/16S102J		R 852	(B,62,104)	RS1/16S472J	
R 406	(B,161,60)	RS1/16S102J		R 853	(B,58,105)	RS1/16S153J	
R 407	(B,161,62)	RS1/16S102J		R 854	(B,77,72)	RS1/16S102J	
R 408	(B,169,50)	RAB4C104J		R 855	(B,81,67)	RS1/16S104J	B
R 409	(B,161,47)	RS1/16S391J		R 871	(B,18,126)	RS1/16S102J	
R 410	(B,161,49)	RS1/16S681J		R 872	(B,20,123)	RS1/16S102J	
R 411	(B,161,51)	RS1/16S681J		R 873	(B,140,24)	RS1/16S103J	
R 412	(B,161,53)	RS1/16S681J		R 874	(B,140,31)	RS1/16S103J	
R 413	(B,161,56)	RS1/16S472J		R 931	(B,106,40)	RS1/16S104J	
R 601	(B,125,28)	RS1/16S473J		R 932	(B,62,100)	RS1/16S223J	
R 603	(B,108,40)	RS1/16S473J		R 933	(A,70,106)	RD1/4PU102J	
R 606	(B,109,70)	RS1/16S473J		R 934	(B,67,113)	RS1/16S473J	
R 608	(B,141,60)	RS1/16S470J		R 935	(B,62,115)	RS1/16S473J	
R 610	(B,123,64)	RS1/16S203J		R 991	(A,14,116)	RD1/4PU271J	
R 611	(B,139,71)	RS1/16S182J		CAPACITORS			
R 612	(B,117,75)	RS1/16S563J		C 151	(B,109,101)	CKSRYB224K10	
R 613	(B,142,52)	RS1/16S302J		C 152	(B,133,95)	CKSRYB224K10	
R 615	(B,114,75)	RS1/16S563J		C 153	(B,109,104)	CKSRYB105K10	
R 616	(B,159,40)	RS1/16S104J		C 154	(B,133,98)	CKSRYB105K10	
				C 155	(A,126,113)	CEJQ470M10	
R 617	(B,137,32)	RS1/16S473J					
R 618	(B,148,41)	RS1/16S473J		C 156	(B,134,101)	CKSRYB105K10	
R 619	(B,149,39)	RS1/16S104J		C 157	(B,109,106)	CKSRYB105K10	
R 638	(B,160,88)	RS1/16S273J		C 162	(B,134,103)	CKSRYB105K10	
R 643	(B,159,38)	RS1/16S104J		C 163	(B,109,108)	CKSRYB105K10	
				C 164	(A,120,113)	CEJQ100M16	D
R 644	(B,99,67)	RS1/16S0R0J					
R 645	(B,101,19)	RS1/16S0R0J		C 165	(B,123,112)	CKSRYB104K16	
R 646	(B,160,16)	RS1/16S0R0J		C 201	(A,129,134)	CEJQ330M10	
R 648	(B,159,74)	RS1/16S0R0J		C 253	(B,97,104)	CKSRYB104K16	
R 651	(B,34,30)	RS1/16S104J		C 301	(B,126,122)	CKSQYB474K16	
				C 302	(B,122,122)	CKSQYB474K16	
R 652	(B,34,35)	RS1/16S102J					
R 653	(B,34,34)	RS1/16S102J		C 303	(B,124,122)	CKSQYB474K16	
R 654	(B,34,32)	RS1/16S221J		C 304	(B,120,122)	CKSQYB474K16	
R 656	(B,107,26)	RS1/16S104J		C 305	(B,126,126)	CKSRYB474K10	
R 657	(B,107,28)	RS1/16S104J		C 306	(B,122,126)	CKSRYB474K10	
				C 307	(B,124,126)	CKSRYB474K10	
R 658	(B,34,37)	RS1/16S104J					
R 659	(B,107,30)	RS1/16S472J		C 308	(B,120,126)	CKSRYB474K10	
R 660	(B,107,32)	RS1/16S472J		C 309	(B,124,139)	CKSQYB225K10	
R 661	(B,111,28)	RS1/16S221J		C 310	(B,116,144)	CKSQYB225K10	
R 662	(B,111,30)	RS1/16S221J		C 312	(A,101,122)	CEJQ100M16	
				C 313	(B,101,141)	CKSRYB104K16	
R 663	(B,111,32)	RS1/16S221J					
R 664	(B,79,54)	RS1/16S473J		C 353	(A,145,119)	CEJQ2R2M50	
R 666	(B,168,30)	RS1/16S103J		C 354	(A,143,112)	CEJQ2R2M50	
R 671	(B,136,24)	RS1/16S473J		C 359	(B,164,137)	CCSQCH471J50	
R 672	(B,110,46)	RS1/16S104J		C 402	(B,142,100)	CKSRYB103K50	
				C 404	(A,150,97)	CEJQ101M10	
R 673	(B,137,27)	RAB4C104J					
R 674	(B,132,27)	RS1/16S104J		C 405	(B,146,100)	CKSRYB103K50	F
R 675	(B,94,59)	RS1/16S473J		C 406	(B,169,53)	CCSRCH390J50	
R 803	(B,86,18)	RS1/16S222J		C 409	(B,161,45)	CCSRCH100D50	
R 821	(B,27,13)	RS1/16S562J					

1

2

3

4

Circuit Symbol and No.**Part No.**

C 601	(B,120,27)	CKSRYB105K10
C 602	(B,121,30)	CKSRYB103K50
A C 603	(B,123,28)	CKSRYB103K50
C 605	(B,108,74)	CKSRYB104K16
C 606	(B,105,56)	CKSRYB103K50
C 607	(B,118,55)	CKSRYB103K50
C 608	(B,95,80)	CKSRYB103K50
C 609	(B,116,72)	CKSRYB331K50
C 610	(A,98,80)	CEJQ101M6R3
C 611	(B,116,70)	CKSRYB331K50
C 612	(B,120,58)	CKSRYB103K50
C 613	(A,104,58)	CEAL101M6R3
C 614	(B,168,88)	CKSRYB102K50
C 615	(B,125,62)	CKSRYB331K50
C 616	(B,125,69)	CKSRYB105K10
C 617	(B,130,61)	CKSRYB105K10
C 619	(B,144,71)	CKSRYB103K50
C 620	(B,144,57)	CKSRYB105K10
C 621	(B,152,70)	CKSRYB103K50
C 622	(B,142,54)	CKSRYB104K16
C 623	(B,134,66)	CKSRYB102K50
C 624	(B,131,66)	CKSRYB102K50
C 625	(B,137,72)	CCSRCH270J50
C 626	(B,131,72)	CCSRCH270J50
C 627	(B,136,79)	CCSRCH150J50
C 628	(B,143,64)	CKSRYB102K50
C 629	(B,136,60)	CCSRCH4R0C50
C 630	(B,144,69)	CCSRCH8R0D50
C 631	(B,108,72)	CKSRYB223K50
C 632	(B,130,23)	CKSRYB104K16
C 633	(B,147,31)	CKSRYB104K16
C 635	(B,147,55)	CKSRYB104K16
C 637	(B,110,77)	CKSRYB103K50
C 640	(B,125,60)	CKSRYB104K16
C 642	(B,109,103)	CKSRYB122K50
C 643	(B,133,99)	CKSRYB122K50
C 646	(B,116,22)	CKSRYB103K50
C 652	(B,49,31)	CKSRYB103K50
C 653	(B,114,33)	CCSRCH220J50
C 821	(B,36,10)	CKSRYB104K16
C 825	(B,61,8)	CCSRCH221J50
C 826	(B,82,14)	CCSRCH221J50
C 827	(B,71,8)	CCSRCH221J50
C 828	(B,69,8)	CCSRCH221J50
C 829	(B,63,8)	CCSRCH221J50
C 830	(B,65,8)	CKSRYB104K16
C 831	(B,67,8)	CCSRCH221J50
C 871	(B,13,133)	CKSRYB103K50
C 872	(B,21,135)	CKSRYB103K50
C 901	(A,52,114) 3 300 uF/16 V	CCH1732
C 911	(A,59,62)	CEJQ100M16
C 912	(A,48,66)	CEAT102M16
C 913	(B,28,71)	CKSRYB104K16
C 914	(A,52,62)	CEAT221M10
C 915	(A,46,55)	CEJQ100M16
C 917	(B,28,77)	CKSRYB104K16
C 991	(B,11,108)	CKSRYB473K25
C 992	(A,12,97)	CEJQ101M10

Circuit Symbol and No.**Part No.****B****Unit Number : (1120MP)****Unit Name : Keyboard Unit****MISCELLANEOUS**

IC 1801	(B,103,21) IC	PD6340A
D 1803	(B,150,19) Diode	MALS068X
D 1804	(B,152,17) Diode	MALS068X
D 1805	(B,146,19) Diode	MALS068X
D 1806	(A,60,22) White LED	NESW505C-5273

D 1807	(A,145,40) LED	CL-195PG-CD
D 1808	(A,148,29) LED	CL-195PG-CD
D 1809	(A,148,19) LED	CL-195PG-CD
D 1810	(A,107,8) LED	CL-195PG-CD
D 1811	(A,120,8) LED	CL-195PG-CD

D 1812	(A,133,8) LED	CL-195PG-CD
D 1813	(A,68,8) LED	CL-195PG-CD
D 1814	(A,81,8) LED	CL-195PG-CD
D 1815	(A,94,8) LED	CL-195PG-CD
D 1816	(A,52,19) LED	CL-195PG-CD

D 1817	(A,37,32) LED	CL-195PG-CD
D 1818	(A,25,19) LED	CL-195PG-CD
D 1819	(A,37,5) LED	CL-195PG-CD
D 1820	(A,11,30) LED	CL-195PG-CD
D 1821	(A,11,12) LED	CL-195PG-CD

X 1801	(B,95,13) Ceramic Resonator 5.00 MHz	CSS1731
S 1801	(A,38,18) Rotary Switch(PWR/VOL)	YSD5019
LCD1801	(A,135,31) LCD	CAW1927

RESISTORS

R 1801	(B,75,6)	RS1/16S222J
R 1802	(B,79,8)	RS1/16S222J
R 1803	(B,144,28)	RS1/4SA561J
R 1804	(B,134,23)	RS1/4SA561J
R 1805	(B,73,20)	RS1/4SA561J

R 1806	(B,50,24)	RS1/4SA391J
R 1807	(B,19,22)	RS1/4SA751J
R 1813	(B,55,23)	RS1/4SA821J
R 1814	(B,26,12)	RS1/16S0R0J
R 1833	(B,136,14)	RS1/16S473J

R 1836	(B,136,20)	RS1/16S101J
R 1837	(B,144,17)	RS1/16S101J
R 1839	(B,51,20)	RS1/16S473J

CAPACITORS

C 1801	(B,112,14)	CKSRYB105K10
C 1810	(B,143,16)	CKSRYB472K50
C 1811	(B,136,19)	CKSRYB472K50

B**Unit Number : (1100MP)****Unit Number : (1100MPB)****Unit Name : Keyboard Unit****MISCELLANEOUS**

IC 1801	(B,103,21) IC	PD6340A
D 1803	(B,150,19) Diode	MALS068X

5		6
<u>Circuit Symbol and No.</u>		<u>Part No.</u>
D 1804	(B,152,17) Diode	MALS068X
D 1805	(B,146,19) Diode	MALS068X
D 1806	(A,60,22) White LED	NESW505C-5273
D 1807	(A,145,40) LED	CL-195SR-CD
D 1808	(A,148,29) LED	CL-195SR-CD
D 1809	(A,148,19) LED	CL-195SR-CD
D 1810	(A,107,8) LED	CL-195SR-CD
D 1811	(A,120,8) LED	CL-195SR-CD
D 1812	(A,133,8) LED	CL-195SR-CD
D 1813	(A,68,8) LED	CL-195SR-CD
D 1814	(A,81,8) LED	CL-195SR-CD
D 1815	(A,94,8) LED	CL-195SR-CD
D 1816	(A,52,19) LED	CL-195SR-CD
D 1817	(A,37,32) LED	CL-195SR-CD
D 1818	(A,25,19) LED	CL-195SR-CD
D 1819	(A,37,5) LED	CL-195SR-CD
D 1820	(A,11,30) LED	CL-195SR-CD
D 1821	(A,11,12) LED	CL-195SR-CD
X 1801	(B,95,13) Ceramic Resonator 5.00 MHz	CSS1731
S 1801	(A,38,18) Rotary Switch(PWR/VOL)	YSD5019
LCD1801	(A,135,31) LCD(1100MP)	CAW1927
	(A,135,31) LCD(1100MPB)	CAW1932

RESISTORS

R 1801	(B,75,6)	RS1/16S222J
R 1802	(B,79,8)	RS1/16S222J
R 1803	(B,144,28)	RS1/4SA821J
R 1804	(B,134,23)	RS1/4SA821J
R 1805	(B,73,20)	RS1/4SA821J
R 1806	(B,50,24)	RS1/4SA391J
R 1807	(B,19,22)	RS1/4SA122J
R 1813	(B,55,23)	RS1/4SA821J
R 1814	(B,26,12)	RS1/16S0R0J
R 1833	(B,136,14)	RS1/16S473J
R 1836	(B,136,20)	RS1/16S101J
R 1837	(B,144,17)	RS1/16S101J
R 1839	(B,51,20)	RS1/16S473J

CAPACITORS

C 1801	(B,112,14)	CKSRYB105K10
C 1810	(B,143,16)	CKSRYB472K50
C 1811	(B,136,19)	CKSRYB472K50



Unit Number : CWX3514

Unit Name : CD Core Unit(S10.5COMP2)

MISCELLANEOUS

IC 201	(A,34,46) IC	PE5668A
IC 301	(A,27,14) IC	BA5839FP
Q 101	(B,56,72) Transistor	2SA1577
Q 102	(B,47,57) Chip Transistor	2SB1689
X 201	(A,23,35) Ceramic Resonator 16.934 MHz	CSS1603
S 901	(A,53,37) Switch(HOME)	CSN1067
S 903	(B,19,58) Switch(DSCSNS)	CSN1067
S 904	(B,38,67) Switch(12EJ)	CSN1068
S 905	(B,24,68) Switch(8EJ)	CSN1068

RESISTORS

7		8
<u>Circuit Symbol and No.</u>		<u>Part No.</u>
R 101	(B,60,73)	RS1/10SR2R4J
R 102	(B,59,71)	RS1/10SR2R4J
R 103	(B,60,71)	RS1/10SR2R7J
R 104	(B,52,69)	RS1/16SS222J
R 105	(B,41,57)	RS1/16SS102J
R 107	(B,41,59)	RS1/16SS105J
R 202	(B,32,62)	RS1/16SS473J
R 203	(B,42,45)	RS1/16S473J
R 204	(A,25,61)	RS1/16SS221J
R 206	(B,26,53)	RS1/16SS104J
R 210	(B,13,32)	RS1/16SS102J
R 214	(B,36,34)	RS1/16SS472J
R 216	(B,47,49)	RS1/16SS472J
R 221	(B,36,32)	RS1/16SS103J
R 222	(B,35,32)	RS1/16SS103J
R 225	(A,49,49)	RS1/16SS103J
R 226	(A,49,50)	RS1/16SS393J
R 227	(B,45,51)	RS1/16SS562J
R 228	(B,42,53)	RS1/16SS122J
R 229	(B,44,53)	RS1/16SS472J
R 230	(B,21,28)	RS1/16SS0R0J
R 232	(B,43,51)	RS1/16SS122J
R 233	(B,29,52)	RS1/16SS103J
R 234	(B,30,61)	RS1/16SS473J
R 235	(A,25,63)	RS1/16SS473J
R 239	(B,26,48)	RS1/16SS473J
R 240	(B,10,31)	RS1/16SS473J
R 241	(B,9,32)	RS1/16SS103J
R 244	(A,20,52)	RS1/16SS473J
R 255	(A,27,63)	RAB4CQ104J
R 307	(A,34,19)	RS1/16SS183J
R 308	(A,38,20)	RS1/16SS183J
R 309	(A,35,21)	RS1/16SS183J
R 310	(A,38,21)	RS1/16SS183J
R 601	(B,28,38)	RS1/16SS0R0J
R 602	(B,27,41)	RS1/16SS0R0J
R 606	(B,23,41)	RS1/16SS0R0J
R 701	(B,16,35)	RS1/16SS221J
R 702	(A,23,55)	RS1/16SS221J

CAPACITORS

C 106	(B,56,69)	CKSQYB475K6R3
C 202	(A,27,57)	CKSSYB104K10
C 204	(A,24,63)	CKSSYB103K16
C 205	(B,23,43)	CKSQYB475K6R3
C 206	(A,22,39)	CKSSYB104K10
C 207	(A,24,37)	CKSRYB104K16
C 209	(B,33,40)	CEVW220M6R3
C 210	(B,29,42)	CKSSYB104K10
C 211	(A,27,34)	CKSSYB104K10
C 212	(B,29,32)	CKSRYB104K16
C 213	(A,44,37)	CKSSYB104K10
C 214	(A,28,33)	CKSSYB104K10
C 216	(A,50,51)	CKSSYB332K50
C 217	(A,46,51)	CKSSYB104K10
C 218	(A,49,51)	CKSSYB473K10
C 219	(A,45,53)	CKSSYB104K10
C 220	(A,46,53)	CKSSYB182K50
C 221	(A,44,53)	CKSSYB104K10

	1	2	3	4
	<u>Circuit Symbol and No.</u>	<u>Part No.</u>		
	C 222 (B,43,53)	CCSSCH560J50		
	C 223 (B,45,53)	CCSSCH4R0C50		
A	C 224 (A,43,55)	CKSSYB104K10		
	C 226 (A,40,58)	CCSSCH680J50		
	C 227 (A,40,60)	CCSSCH470J50		
	C 228 (A,39,62)	CKSSYB103K16		
	C 229 (B,49,59)	CKSSYB104K10		
	C 236 (A,42,61)	CKSSYB104K10		
	C 239 (B,44,51)	CCSSCH220J50		
	C 240 (A,35,61)	CKSSYB104K10		
	C 250 (B,36,30)	CKSSYB102K50		
	C 251 (B,33,29)	CKSSYB102K50		
	C 303 (A,35,19)	CKSSYB472K25		
B	C 304 (A,34,21)	CKSSYB223K16		
	C 307 (B,25,9)	CKSRYB104K16		
	C 308 (B,10,27)	CKSRYB105K10		
	C 703 (B,11,37)	CCSSCH101J50		
	C 704 (B,8,36)	CKSSYB102K50		
	C 711 (A,25,26)	CKSSYB104K10		

Miscellaneous Parts List

	Pickup Unit(P10.5)(Service)	CXX1942
M 1	Motor Unit(SPINDLE)	CXC7134
M 2	Motor Unit(LOADING/CARRIAGE)	CXC4026